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ABSTRACT

Keynote addresses, minutes of the meetings, committee reports, and a list of the 72 participants are given in this report of an annual meeting of educational media specialists at Lake Okoboji (Iowa). The keynote addresses were concerned with the application of educational technology and interdependence in the industrial-instructional revolution. The Conference Summary states the need to pioneer in ways to make the education-industry dialogue come alive. The committee reports were concerned with defining the roles for education and industry, providing options in education through media, technology and dehumanization, adaptation of instructional materials and equipment to an era of change; the need for criteria, and the recommendation that a national forum composed of leading educators and industrialists be convened in 1969 to devise a model for continuing dialogue. Appendices include an evaluation of the 1968 Okoboji conference and a compilation of the concerns of various delegates. (MF)

Summary Report

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Education-Industry Dialogue

Educational Technology

Lake Okoboji
Educational Media
Leadership Conference
14th. Annual/1968

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SUMMARY REPORT

of the

FOURTEENTH LAKE OKOBOJI EDUCATIONAL MEDIA LEADERSHIP CONFERENCE

Iowa Lakeside Laboratory
Lake Okoboji
Milford, Iowa

August 18-22, 1968

Sponsored by
The University of Iowa
Division of Extension
and University Services
Iowa City, Iowa

and the

Department of Audiovisual Instruction
National Education Association
Washington, D. C.

Appreciation is extended to Teaching Film Custodians, Inc., for partial support by providing funds earned through the distribution of films furnished by member companies of the Motion Picture Association, Inc.

THIS REPORT EDITED BY:
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Audiovisual Center, The University of Iowa
Iowa City, Iowa 52240

NOTE: This Summary Report of the Fourteenth Lake Okoboji Educational Media Leadership Conference should be considered as a series of working papers and should be so listed if reproduced in any form.

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FOREWORD

To those educational media specialists who have attended one or more of the Lake Okoboji Educational Media Leadership Conferences, there seems to remain after each conference a lingering awareness of the many problems facing education today, and a desire to try to find answers. An Evaluation Committee in August 1968, asked to study the values and future of the Okoboji Conference, indicated "The magic of Okoboji cannot be denied. There is a spirit of camaraderie, cooperation, and dedication that cannot be discovered in an evaluation form. It is discovered by observing the enthusiastic behavior of the delegates and staff as they respond to the Okoboji environment. Even the heat of the day could not cool the warm acceptance of what occurs at Okoboji." The committee reported that the delegates indicated the main purposes of the conference, in their estimation, were:

1. The development of leadership and future leaders.
2. The exchange and testing of new ideas, concepts, information, and trends and directions.
3. The discussion of a major theme and related issues.

To those who have not attended the Okoboji Conference, the meeting is probably "just another conference." But, it is more than "another conference." It is a "think-tank" where the delegates merge themselves in a selected topic for four days and try to predict the future. To those who have not attended an Okoboji Conference, it must be understood that every report of the various committees must be accepted by all delegates before it can be approved for publication. This report is an amalgamation of the thinking of eighty delegates, but must be considered as a working paper, since its content is put together after long hours of discussion, writing, and re-writing.

If there is any so-called "magic" about the conference, in the estimation of the author, it is due to several factors:

...the unstructured nature of the conference
...the opportunity of each delegate to meet his peers in open discussion
...exploring in depth certain problems, and documenting them for publishing in this summary report

Each delegate takes away from Okoboji his own feelings as to what contribution the conference makes to him and what he contributed to the conference. He is his own jury and judge and it is thought the "take-home pay" is in proportion to the individual's contribution.

Lee W. Cochran

Lee W. Cochran
The University of Iowa

Chairman: Iowa Committee for
Okoboji Conferences

PERSONS ATTENDING THE FOURTEENTH LAKE OKOBOJI EDUCATIONAL MEDIA LEADERSHIP CONFERENCE

August 18-22, 1968
Iowa Lakeside Laboratory, Milford, Iowa

Note: (67) The number in parenthesis following the name indicates the previous years this person has attended Okoboji conferences and special committee assignments, if any.

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6. Bock, Harry, Audio-Visual Coordinator, Alfred I. duPont School District, Concord Pike, Wilmington, Delaware 19803 (68)

7. Brown, Luther, Director, Learning Resources, St. Cloud State College, St. Cloud, Minnesota 56301 (68)

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9. Clark, Ann, Audiovisual Center, The University of Iowa, Iowa City, Iowa 52240 (62 through 68) (Conference Office Manager--Iowa Committee)

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20. Dawson, Edward H., Director, Title III, Somerset County Media Center, 422 Route 206 South, Somerville, New Jersey 08876 (65, 67, 68) (Planning Committee 1968)

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24. Gerlach, Vernon, Coordinator, Educational Technology, Arizona State University, Tempe, Arizona 85281 (62, 63, 64, 66, 68)

25. Gerletti, Robert, Director, Division of Educational Media, Los Angeles County Schools, 155 West Washington Blvd., Los Angeles, California 90015 (DAVI Executive Committee) (68)

26. Gifford, David S., Consultant, Educational Media, State Department of Education, Box 2219, Hartford, Connecticut 06115 (67, 68)

27. Gomez, Ely, Owen Hall, Michigan State University, East Lansing, Michigan 48824 (From Philippine Islands) (68)

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29. Haffner, Warren, Audiovisual Consultant, Educational Resources Center, P. O. Box 42, Sergeant Bluff, Iowa 51054 (68) (Iowa Committee)

30. Harvey, Lester W., Director, Library-Media Services, State Department of Education, State Capitol, Lincoln, Nebraska 68509 (68)

31. Hedges, John R., 30 Leamer Court, Iowa City, Iowa 52240 (55 through 68) (Honorary Chairman - Iowa Committee)

32. Henry, Theodore, Director, Audio Visual Education, Penn Yan Central Schools, Penn Yan, New York 14527 (68)

33. Hill, Harold E., Associate Director, Bureau of Audiovisual Instruction, University of Colorado, Stadium 365, Boulder, Colorado 80302 (63 through 68) (Chairman, Planning Committee 1968)

34. Hitchens, Lt. Col. Howard B., Jr., Director of Instructional Technology, U. S. Air Force Academy, Colorado 80840 (66, 67, 68) (Planning Committee 1968)

35. Horsman, Donald L., Manager, Systems and Course Design, Commercial and Industrial Division, Westinghouse Learning Corporation, Chatham Center Office Building, Pittsburgh, Pennsylvania 15230 (68)

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48. Nibeck, Richard, Department of Audiovisual Instruction, National Education Association, 1201 Sixteenth Street N. W., Washington, D. C. 20036 (63, 64, 66, 68) (Representing DAVI Office)

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61. Scofield, Mary (Mrs.), Director, Audio Visual Services, Temple Buell College, Denver, Colorado 80220 (68)

62. Skornia, Harry, Professor, Department of Radio-Television, University of Illinois, 119 Gregory Hall, Champaign, Illinois (68)

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66. Tirrell, John A., Senior Consultant, Educational Services Division, General Learning Corporation, Morristown, New Jersey 07960 (67, 68)

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68. Walton, Eldon F., Area XI Community College, Ankeny, Iowa 50021 (68) (Iowa Committee)

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1968 OKOBOJI CONFERENCE PLANNING COMMITTEE

In October, 1967, DAVI President Wesley Meierhenry, appointed the following persons to serve as a planning committee for the Fourteenth Lake Okoboji Educational Media Leadership Conference:

Harold Hill, Chairman
Peggy Sullivan
David Crossman
Howard Hitchens
Edward Dawson
Irene Cypher*
John Barson*
Richard Nibeck, Ex-Officio
Lee Cochran, Ex-Officio

*Irene Cypher and John Barson served on the planning committee but were unable to attend the 1968 conference.

Each member of the planning committee received a list of the five topics receiving the greatest number of votes by 1967 Okoboji Conference delegates as recommended topics for the 1968 meeting. Committee members selected the topic "Education-Industry Dialogue."

Committee members were asked to nominate delegates to serve as resource personnel apropos to the selected topic. Also, thirty-six academic institutions with advanced graduate programs in media were contacted and asked to nominate graduate students for possible selection as conference delegates. All nominations were then considered when the planning committee met as a group during the 1968 DAVI Convention in Houston.

In December, the DAVI Office in Washington, D. C. sent to each of the DAVI Affiliated groups a letter asking for the nominations of a delegate to the Okoboji Conference. Nominations from the Affiliated groups were administered by the DAVI staff who compiled a list of delegates to receive conference invitations. These invitations were then mailed to the designated delegates by Lee W. Cochran, Chairman of the Iowa Committee.

The planning committee met twice as a group during the Houston Convention in March. Committee members reviewed the nominations of potential resource delegates and graduate students. Fifteen persons were selected to receive invitations as resource delegates; five graduate students were chosen as potential delegates. Two keynote speakers were also selected by the committee.

Planning committee members met next on August 17, 1968, the day before the opening of the conference. This meeting was held to establish a "semi-structure" for the opening sessions and to appoint administrative committees.

If the 1968 Okoboji Conference can be considered a success, much of the credit should go to planning committee members who provided leadership and direction in getting the conference underway.

* * * * * *

FIRST GENERAL SESSION

Sunday, August 18, 1968
1:30 p.m.
Presiding: Lee W. Cochran, Chairman, Iowa Committee for Okoboji Conferences, and Harold Hill, Chairman, 1968 Okoboji Conference Planning Committee

I. Lee W. Cochran opened the conference with a personal welcome to all delegates and brought greetings from Dr. Howard R. Bowen, President of The University of Iowa and from Dean Robert F. Ray, Division of Extension and University Services. First-time conferees were given some information about the people and resources of the host state and about the Iowa Lakeside Laboratory.

"The Indian word Okoboji means place of rest. You may not agree with this definition when the conference closes at noon Thursday but that will be up to the co-chairmen you elect and the schedule they prepare for you."

Mr. Cochran told the delegates that the first Okoboji Conference was held in 1955 and that they were attending the fourteenth consecutive conference to be co-sponsored by DAVI and The University of Iowa. He attributed the success of past conferences to four factors: 1) the high caliber of delegates; 2) the isolation of the conference site thus insuring a "captive" audience; 3) the close proximity of the delegates to one another allowing for interaction not otherwise possible, and 4) the knowledge that all obligations for the success of the conference rested upon the delegates themselves.

"We may not shake the rafters of NEA, AASA, and the Association of College Presidents with our decisions here this week, but we may start working papers that have a long-range effect on the way educators who earn tax dollars by teaching and other educators who receive tax dollars through the sale of products to the schools can best work together."

After a brief reference to conference ground rules, Mr. Cochran introduced individual members of the Iowa Committee.

II. "The Okoboji Experience," a film produced by The University of Iowa Motion Picture Production Unit from footage shot during the 1967 Okoboji Conference, was viewed by the delegates. Lee W. Cochran told the conferees that the film would be available on a cost-free loan basis for use by various organizations.

III. Mr. Cochran introduced the 1968 Planning Committee and presented the conference gavel to the committee chairman, Harold Hill. Mr. Hill also received a "Hill equalizer," a symbol of his elevated status as planning committee chairman.

IV. Each of the delegates was asked to rise briefly and introduce himself to the group.

(First General Session - continued)

V. Harold Hill explained that the conference topic "Education-Industry Dialogue" had been selected by the planning committee from several topics suggested by the 1967 conference delegates. He reminded the 1968 delegates that they could exercise an option to retain the pre-selected topic or reject it and choose a new one. Arthur Lalime moved that the topic "Education-Industry Dialogue" be retained for the current conference. The motion was seconded and approved by the delegates.

VI. Mr. Hill then moved to a procedure he termed the "itty-bitty gritty," the formation of various committees and the appointment of committee members to assist in the administrative details of the conference. Appointments included:

A. Futures Committee (a special committee appointed every three to four years to survey the direction of past Okoboji conferences and make recommendations for the future.)

Lee Campion, Chairman
Arthur Lalime
Gordon Blank
John Barson (who was unable to attend the conference but had already corresponded with other committee members)

B. Chairman of Rest:

Vernon Gerlach

C. Resolutions Committee:

Robert Gerletti, Chairman
Richard Nibeck
Harry Skornia

D. Press Committee:

David Gifford, Chairman
Jeanne Davis
Mary Scofield
Devore Killip

E. Blabbermouth:

Leone Lake, Chairman
Lester Harvey
Harold Hill
John Lauria
Charlie Roberts

F. Conference Visualizers:

David Little
Paul Zuckerman

G. Summary Report:

Norman Felsenthal, Editor
Warren Haffner

(First General Session - continued)

H. Audio Tape Recording:
Eldon Walton

I. Video Tape Recording:
Norman Felsenthal

J. "Show and Tell" Coordinator:
Marie McMahan

K. Keeper of the Word:
Harold Hill

Planning Committee Chairman Hill

VII. A previously appointed nominating committee, Howard Hitchens, Chairman, Gordon Blank, and Richard Nibeck, was asked to present its slate of nominees for conference co-chairmen to the delegates for balloting. Nominees included David Crossman, Arthur Cowdery, Arthur Lalime, Peggy Sullivan, and Gordon Tubbs. Ballots were distributed to the delegates and then collected for tabulation.

VIII. Harold Hill provided levity while the ballots for co-chairmen were being counted by members of the nominating committee. One of his stories involved the weighty problem of an elementary school principal.

IX. Howard Hitchens announced the election of Arthur Lalime and David Crossman as co-chairmen for the 1968 Okoboji Conference.

X. Harold Hill made two additional committee appointments before presenting the conference gavel to the newly elected co-chairmen. These included:

A. Social Committee:
John Hedges, Chairman
David Little
Peggy Sullivan

B. Conference Summarizer:
Gordon Tubbs

XI. The conference gavel was presented to co-chairmen Arthur Lalime and David Crossman. A short coffee break followed.

XII. The conference reconvened at 3:20 p. m. with Arthur Lalime presiding. He thanked the delegates for the confidence they had expressed in David Crossman and himself and promised to move the conference as efficiently as possible in the direction which the delegates desired.

XIII. Mr. Lalime introduced the first keynote speaker, Dr. James Finn.

Note: We regret that the keynote talk by Dr. James D. Finn was not available when this Summary Report went to press. We fully realize that Dr. Finn has many obligations that no doubt accounted for his not having an edited copy for publication. Perhaps his paper will be made available through some other publication at a later date.

We present this summation, excerpted by Norman Felsenthal, the Conference Recorder, from the tape recording of Dr. Finn's address. This summation attempts to capture the basic content of Dr. Finn's presentation:

DIALOGUE IN SEARCH OF RELEVANCE

I would like to share with you today some thoughts or muses on the topic "Dialogue in Search of Relevance--Balance and Emphasis." Dialogue is very much an "in" word in educational circles. Dialogue is really "old hat" to those of us who are in the media field. We have always had dialogue with representatives from industry.

We have moved from the small businessman to the giant corporation; the "combines" which some of you are so worried about. So far nothing much has happened. There have been more failures than successes (among companies who are entering the educational market for the first time). Many companies are getting in and out quickly, some of them several times.

It has been the tendency of industry to collect behavior scientists of the Skinnerian type and concentrate industry's efforts along this line. I think educators, in general, are puzzled by the move from the camera store to IBM. This change will be very remarkable when it occurs and my thesis is that we need some direction in where to go.

The key words to me are not the history and significance of the educational dialogue, but rather its nature and direction. Direction is what industry needs and direction is what education should give. And I believe that the spokemen for the entire field of education should be from our own field of educational technology.

The direction must be relevant for our time. To answer the question of what is relevant, I spoke by telephone with Dr. Arthur Pearl, School of Education, The University of Oregon, a man who I believe is destined to be the number one educational philosopher in the United States. Here are some of Dr. Pearl's comments which I recorded during our telephone conversation:

> Education to be relevant has to meet four criteria which are crucial for living in our modern, technologically advanced and complicated world.
>
> 1. First, education must be relevant to the world of work. Everyone going to school should be getting a wide range of vocational choices in how to earn a living. Students should not be prepared for a job but for a choice of jobs.
>
> 2. Education must be relevant to the political structure. A complicated society requires more understanding in legislative, executive, and judicial decision making. This means student government has to be real, to serve a real function.

(Finn's summation continued)

3. A relevant education requires much more intellectual inquiry; people have to be turned on intellectually. It's not enough for people to do what a computer does better--code, store, and retrieve facts. These people must be able to fret and to conceptualize; they have to be able to analyze; they have to be turned on to literature, art, music, science, and math. They have to become cultural carriers and they have to appreciate the various different cultures that a complicated society has.

4. Interpersonal relations must be a part of a relevant education. People must acquire the competence to live with their neighbors in a more crowded society.

Unless education deals with the central issues of our time, the program is worthless. Education that is non-controversial is meaningless. A scholar must do more than acquire a vocabulary; he must be involved in action.

There is one point in education that must be non-negotiable. That point involves the Bill of Rights, the rights of an individual in a free society. Many schools work for behavior modification: to get children to act alike and to look and dress alike. School administrators are very anti-Bill of Rights in this sense. Their system is very central--shape up or ship out. Media people who work with administrators must become passionate advocates of democracy. With complacency, a person becomes the enemy of democracy.

This relevance which Arthur Pearl talks about can be achieved by changing our emphases. We have tended to emphasize order and system. I believe we must now move in the direction of freedom--freedom for everyone in the system.

John Kenneth Galbraith defines technology as the systematic application of scientific or other organized knowledge to practical tasks. The main characteristic of technology is the breaking down of tasks into detailed subdivisions so that organized knowledge may be put to work.

"Planning involves inevitably the control of human behavior. The denial that we do any planning has helped to conceal the fact that control exists, even from those who are controlled," says Galbraith.

Galbraith is speaking of economic planning but I believe his comments apply across the board to our technological culture and to any large scale application of instructional technology.

There is a deeper dialogue involving deeper philosophical statements which we all need to hear. Unless we listen to what some of our bright young people are saying, to what the new left is trying to expound, to what some artists are expressing, we, as educators, may fail this country and all the young people in it. This deeper dialogue is between the industrial state--which exercises impersonal control over people, no matter to what degree they are right or wrong--and the spokesmen for men as human beings, for man in microcosm. An educator, it seems to me, does not have to adopt totally the view of one side or the other. This is what I mean by relevance and balance.

Two observations can be made about the education young people receive in our colleges today.

First, students end up hating books. They acquire this hatred systematically. You can't learn to enjoy reading if you have to pull something out of every book you pick up--if you have to produce a paper or a seminar report.

(Finn's summation continued)

This explains the attraction of university undergraduates to Marshall McLuhan. McLuhan has a philosophy that is basically anti-book and it's very attractive to people who come in contact with books the way university students do. The reason there are underground books at a university is not that these books have more to say but that students can read them without compulsion. You destroy a book by turning it into an assignment; you can destroy anything that way.

Second, university students are removed from men with ideas. Universities are inhospitable to a learned man--a man with a vision of unified knowledge. It is impossible for him to be in a university because he isn't a good enough specialist. The university student comes in contact with intellectual technicians who are uninspiring and dull. No student can have any respect for them.

A student can not know what the life of the mind is like because he hates books and because he never comes in contact with men who have lived the life of the mind.

What are my suggestions to you about the direction of the education-industry dialogue, and I emphasize that we, the educators, are the ones that need to give this dialogue direction? I would like to suggest some margins because I believe the marginal media man is always between this and that.

As a past supporter of behaviorism and shaping, I do not believe we should throw out the baby with the bath; but somehow we have got to get over on the human free side as well. We are sort of standing with one foot in both camps.

There are several things we need to do and I want to conclude my speech with five suggestions:

1. We must alter our theoretical framework which is now moving in the direction of behavioral shaping at too rapid a rate. We must slow down this trend though I don't mean to imply that we should wipe it out.

2. We have to consider the intellectual disciplines and begin a dialogue with the people in these disciplines in order to help them make their teaching at all levels more relevant. I do not believe it is the content that ever was irrelevant--some of the things in Greek history are relevant to our current period--but the disciplinarians do not understand this. And I believe you can get them to understand, if you can get them to give more attention to the human factors involved.

3. I believe we should insist that the products and efforts of industry concentrate on the human being. In the next few

(Finn's summation continued)

years we need more to follow the lead of (Carl) Rogers and (Abraham) Maslow than we do Skinner and other behaviorists. With media and a different instructional design, we can move into the affective domain and be concerned with human beings.

4. We must also realize the need to effectively deal with power groups. I predict that we are going to have more conflict with teacher militancy; negotiations are going to hinge eventually on the application of educational technology--whether money is to be spent on a language laboratory or to raise teachers' salaries. We have to deal with other minority and power groups as well. These groups include women and students, two of the most down-trodden minorities of our times. We must fight against any form of censorship whatsoever. I would make this absolute. If you sit once again like you did in the early 1950's, we will go down the tubes, I think, for sure. We must move to general freedom, to openness, and be problem-oriented in what we do and how we deal with people. We have got to encourage creativity, and this requires a different kind of medium from one designed for behavioral shaping.

5. Finally, I think we have to take a general ethical position. The question is very simple. Whose side are you going to be on? I don't mean to imply that industry is bad. And I claim no conspiracy theory. But isn't it time to give industry some direction. If no direction is given, it is inevitable that technology will take off on its own. We will have lost a battle and a war; a war that can be won very easily if you leave Okoboji with the determination to be on the side of human beings and the Bill of Rights no matter what.

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XIV. After a very short break, the second keynote speaker, Dr. P. Kenneth Komoski, was introduced. (See page 15 for Dr. Komoski's speech)

THE SECOND INDUSTRIAL-INSTRUCTIONAL REVOLUTION

Industry and Education in the United States -- from Interplay to Interdependence

P. Kenneth Komoski, Director EPIE Institute

In order to provide some insight into my approach to the theme of this conference, let me offer a proposition: that the interplay between industry and education in America during the last century and a half has had a more profound effect on our patterns of living and learning than the interplay between any other pair of American institutions. This uniquely American interplay of industry and education seems to date from the appearance in America of two early nineteenth century imports from Great Britain: the techniques of industrial mass production born in the English factories of the First Industrial Revolution; and the techniques of educational mass instruction used in the "infant" or "poor" schools that served as havens for children too young to work alongside their parents in British factories. By the time the American Republic had gotten very far into its second quarter century, the nature of both production and instruction in America had already been clearly affected by these two imports, and factories and factory-like schooling were functioning side by side in a number of American cities. One of the first such schools was opened in New York City in 1809 and was warmly praised by DeWitt Clinton, the State's first Governor, for using...

> "... a system which is, in education, what the neat finished machines for abridging labor and expense are in the mechanic arts... It arrives at its object with the least possible trouble and at the least possible expense. Its distinguishing characteristics are economy, facility, order and emulation... And to borrow a most just and striking remark, 'the beauty of the system is that nothing is trusted to the boy himself; he does not only repeat the lesson before a superior, but he learns before a superior.' Solitary study does not exist in the establishment. The children are taught in companies."

The "system" being described had been invented eight years earlier in England by Joseph Lancaster, and after its first use in the United States in 1808, Lancastrian schools spread rapidly among the cities of the eastern seaboard and as far west as Pittsburgh by 1820.

For all of its factory-like procedures, Lancaster's "system" clearly met the needs of its time, and, as a result, its ideas extended beyond the "poor schools" to urban public schooling. For the public schools it offered inexpensive, lock-step mass instructional techniques to help them cope with the unprecedented task of providing free elementary schooling for all. Its effect, however, was to make teaching and learning a highly routinized group process in which pupils were graded and classed for instruction in much the same way as the nineteenth century factory graded its raw materials for production.

(Komoski's keynote address continued)

During the second half of the century, urban public schools were forced to concentrate more and more on the task of systematically instructing increasing numbers of students. And before long they also came under pressure to increase the number of their curricular offerings. Jacob Bigelow, a self-styled educational critic of the period, summed up the problem to an audience at the Massachusetts Institute of Technology in 1865: "The amount of knowledge appropriate to civilization, which now exists in the world, is more than double, and, in many cases, more than ten-fold, what it was about a half-century ago." To cope with this nineteenth-century knowledge explosion, Bigelow suggested a "specialization of learning" and called for the use of the "industrial practice of a division of labor within the schools of New England." During this period the pressure to divide or classify students in order to increase instructional efficiency is also evident in Barnard's educational Journal for 1865, in which Grimshaw wrote of the foolhardiness of those who persisted in using "the old-fashioned and false" method of individual instruction. A half-century later, during the early years of this century, the then new industrial technique of "scientific management" was adapted to the task of "school management" by an efficiency-minded professor of education from the University of Chicago named Franklin Bobbit. His industry-generated ideas greatly influenced both the administration and the curricula of American schools during the first half of the present century. And, bringing a century and a half of industry-education interplay up to the present, today we find that yet another industry-generated phenomenon, "organized labor", is emerging within American public education.

The present unrest within American public education has strong roots in this 150-year interaction of private industry and public education. Many of today's teacher and student militants, alike, are voicing devastating criticism against "mass-produced education" while more positive educational reformers emphasize the need to "individualize" and "personalize" school curricula. But this situation is not without irony. For while the militants are decrying the effect of mass production techniques and industrial practices on education, others who are equally bent on changing the system are looking to the extended use of modern industrial technology to help them achieve individualized and personalized approaches to learning.

Ironic, yes, but the irony is in no way inconsistent with life in a complex, dynamic, and, as yet, far from mature technological society. Nevertheless, this irony does need to be understood and dealt with as part of the reality within which any positive revolution in American education must take place. So, in an effort to gain some much-needed understanding, let us look at the present situation from a somewhat historical-theoretical position which will hopefully provide us with practical insight as well.

As has been shown, the nineteenth-century school shared with the nineteenth-century factory deadly dull routine, and an authoritarian approach to discipline, reinforced by corporal punishment. Those who could not be processed successfully through that factory-like education system found themselves dumped (like industrial waste) to "the other side of the tracks" into

(Komoski's keynote address continued)

slums from which far too few escaped. Nevertheless, as we have noted, this very factory-like education system made it possible for American educators to take on with considerable success, a massive educational challenge--the fee-free instruction of ever-increasing numbers of learners with diverse national, social, ethnic, and religious backgrounds with a rapidly expanding system of public instruction.

The point is, I think, that this task could not have been accomplished without some sort of instructional revolution that would make education accessible and inexpensive enough to become a free popular pursuit. However, a point that is frequently missed is that this instructional revolution would not have been possible if American educators had not learned to adapt the then revolutionary industrial process of mass production to the country's need for inexpensive mass instruction. Thus, the largely unpremeditated interplay between America's private industries and its public schools during a period dominated by the technology of the first "industrial revolution" made it possible for this country to move premeditatedly toward its nineteenth-century goals of a universally educated and universally employable population.

Attempting to accomplish these goals required concerted efforts to organize and give commitment to local education in communities across the country. However, once these local efforts had been made and shown to work, they tended in time to be simply reworked and eventually overworked. Because of this trend, the energy within a once vital local educational system frequently took the form of unadaptive conditioned responses rather than the form of adaptive responses to changing conditions. The result of this "trendency" is now clear: American industrial and social life has undergone a revolution since the development of the nineteenth-century factory-like school, but the school itself has, at best, undergone little more than a haphazard evolution. We should not, therefore, be at all surprised that one group of today's educational reformers are in revolt against "unresponsive," "mass-produced," "industry-inspired," educational systems, while others advocate the use of "new industrial technology" to bring about a new "instructional revolution" characterized by "innovative," "individualized," "highly responsive," instructional systems. This latter group of reformers seems to be saying that the problem now facing American education is caused by the fact that the left-over forms, practices, and techniques of this country's first (nineteenth-century) industrial-instructional revolution are now in conflict with the newly emerging forms, practices and technologies of what they see as a long over-due "second" industrial-instructional revolution, although none of them might put it quite so theoretically.

This prompts me to offer a second proposition: that the interaction of industry and education in the United States has entered a new stage in which the earlier indirect and unconscious interplay of education and industry has been transformed into a closely-knit INTERDEPENDENCY by the complex educational and social implications of the second industrial revolution. This growing interdependency has many aspects: industry no longer has a

(Komoski's keynote address continued)

seemingly endless array of jobs for those who are not processable by the educational system and is, therefore, more dependent on education for the manpower it needs; education must learn how to reduce its number of dropouts or industry will perhaps take on the task directly (as is now happening in industry-run Job Corps camps); the mass media (especially television) have put great resources of "informal" education in the hands of industry and this has made the task of "formal" schooling easier and more difficult at one and the same time; finally, there is the increasingly direct involvement of industry in the schooling of young and old through the creation of materials, equipment, and "systems," ranging from books and films to "talking typewriters" and other artifacts of present day technology.

It is within this direct servicing of society's learning needs by the new educational technology industry that the growing industry-education interdependency may be most readily observed. And of particular importance is the symbiosis that has evolved in recent years between this newly (e)merged major American "industry" and its educational supporters in federal agencies, universities, and schools. While this symbiosis is, itself, still an emerging phenomenon, it is more than likely that within its range of obvious to not so obvious, to extremely subtle interdependencies lies the heart of what I have labeled as the second industrial-instructional revolution.

In choosing the phrase "industrial-instructional revolution," I have used the word "instructional" when I might instead have chosen to talk about an industrial- "educational" revolution. My first reason for explicitly labeling this an "instructional" revolution stems from the fact that as I examine the growth of both industry and education during the nineteenth century, I am struck by the fact that the methods developed for structuring the mass production of goods throughout the century seem to be mirrored in the methods used by educators in structuring a system for the mass-production of learning. I am not just playing on words here, but mean to suggest another, far more important, reason for selecting the word "instructional" to describe this industrially-related revolution in education. This reason is that there seems to be a rather deeply rooted conceptual relationship between the words "industry" and "instruction."

This relationship, it appears, comes from the fact that both words have to do with the peculiarly human predilection to purposefully structure our actions, things, and techniques in order to produce specific results. Upon further investigation, one also discovers that at their most fundamental levels of meaning, these seemingly unrelated words converge within the larger concept of technology; or, so it would seem if we accept the insights into the complexities of this concept as described by two modern commentators on the origin of the Greek word "technologia." The most persuasive of these, Walter Ong of Weslyan University, says that to the Greeks, the concept technologia originally had to do with the "ordering of subject matter in a logical fashion so that it might be taught!" The late Scott Buchanan, another student of ancient

(Komoski's keynote address continued)

Greece and modern technology, has pointed out that the Greek word *techne* "signified the power or capacity, the habit or skill and the intellectual virtue of a man to make a product or an artifact," so the relationship of *techne* to instruction, says Buchanan, was summed up for the Greeks thus: "If you want to understand something, make a similar object or artifact." Finally we find Ong maintaining that "technology" at its most profound level of meaning has to do with "the ordering of possessions of the human mind." (Is then the computer, to the extent that it is an analog of the human mind, the purest artifact of technology? And "instruction," in as much as it deals directly with the "ordering of the possessions of the human mind," the purest technological act?)

These insights into the three-sided relationship of industry, instruction, and technology--particularly Walter Ong's perception of technology as having to do with as fundamental a process as the ordering of human thought--I think suggest further insights into the nature of the interplay between industry and education.

One insight so suggested is that the vast amount of thought which nineteenth-century man put into the first successful attempt at large-scale, highly ordered production would be expected to spill over into other large-scale organizational undertakings. If one grants that there is a fundamental conceptual relationship between "industry" as the systematic ordering of man's thinking about production and "instruction" as the systematic ordering of his thoughts about how to transmit learning, then it would indeed seem inevitable that in a highly industrialized society the organization of learning would be profoundly affected by industry. Furthermore, if we accept this hypothesis then the next question for us to ask is, "just what forms, practices, and specific technologies will come to characterize the second industrial revolution and thereby affect the second instructional revolution?" While many of us may feel that this is a conjectural question, today's educational-industrial entrepreneurs do not hesitate to tell us the answer. And, if one listens closely to what they are saying, one cannot help agreeing that in many cases these educational reformers seem to be sensing correctly the instructional implications of a new industrial era, and the necessary re-ordering of thought which it seems to be ushering in. The revolution they are predicting is one in which education will break with nineteenth-century lock-step learning, and break out of the technological forms of the factory-like school. In place of these vestiges of the first instructional revolution will be flexible learning environments in which it will be possible for each student to learn some things in large groups, some in small groups, and as much as possible in the privacy of a personal electronic study carrel through which he may call on a library of mediated, immediate events whether in school or at home.

They also tell us that to a very great extent this revolutionary re-ordering of learning will be dependent upon a parallel revolution in the design and form of the material artifacts or media of learning. Or, at the very least,

(Komoski's keynote address continued)

it will bring about a revolutionary re-structuring of the use of those existing artifacts that lend themselves to such re-structuring. Furthermore, it would seem that they are also saying that this revolution-in-the-making will not require a revolution in educational philosophy. (We have had a philosophy calling for the individualization of the curriculum at least since the turn of the century when Pierce and Dewey started the revolt against lock-step routinized factory-like learning.) What it will require, however, is a revolution in educational practice that will turn our talk about a philosophy of individualization into an operational reality.

To accomplish this would seem to require a complete macrocosmic remodeling of the country's elementary and secondary schools, not necessarily along the lines of the twentieth-century factory, but more likely shaped by the new organizational forms and practices implicit in what has become known in industry as the "systems approach." However, for a number of reasons American educators are not likely to undertake the macrocosmic remodeling and re-ordering of their existing educational systems. They are likely to generate a great deal of talk about "complete redesign based on systems thinking" while the actual redesign of their enterprises is more apt to come as the result of a gradual adaptation of present design to the organizational implications of innovative instructional materials and equipment. In short, although the new industrial-instructional revolution may in time be built around a "total or large-scale systems thinking," for the present a systems "rethinking" prompted by the educator's adoption of and adaptation to the less than "total" instructional systems now being produced by the new education industry will predominate. Industry spokesmen, too, talk a good deal about revolutionizing education through the use of "a total systems approach," but judged by its present products the industry itself appears to be occupied with randomly producing and marketing a helter-skelter, unsystematic array of instructional artifacts and services.

But no matter how random or helter-skelter the present array of products may seem, it does have within it the value of a broad range of instructional options for which educators should not only be grateful, but about which they should be as informed as possible. For it may well be that by making unexamined decisions about these instructional options they will also be making unexamined decisions about organizational alternatives that will profoundly affect the future of their educational systems.

If this be the case, it would be well to analyze carefully these new instructional products and the options they contain. Implicit in their form, content, and patterns of use lie a host of educational assumptions which the responsible professional should be able to discover. Some of these are more in keeping with the world of the second than the world of the first industrial-instructional revolution, while others may be found to be clever but unproductive reworkings of century-old assumptions and products. Analyses may help us, too, to discern something of the direction in which the contemporary

(Komoski's keynote address continued)

symbiosis of industry and education may be taking us. And, by examining these new artifacts of instruction, and explicating the educational objectives, social goals, and human values implicit within them, we ought to be able to discover a good deal about the real objectives of our educational systems as contrasted with our stated objectives.

If all of this seems to be putting undue emphasis on the material and equipment (things) side of learning, my only defense is to point out (a la Jimmy Durante), "Dat dem is da conditions dat prevail." It is a fact that materials, equipment, and systems are playing a more and more important role in education. This prevailing condition is, I believe, ample justification for examining with great care all contemporary artifacts of instruction, not only in terms of their design and purpose, but in terms of their actual use and effect on specific types of learners in specific learning environments. Were this examination to take place on a broad enough scale, we might, I think, learn a good deal about the opportunities and the limitations likely to be operating during the second industrial-instructional revolution. It must be granted that the opportunities will be greater and the limitations are likely to be fewer than those which were present during the first such revolution, but no technological system is entirely "open". Therefore, despite statements (by industrialists and educators alike) about the adaptiveness of the new technology to any conditions, including the "learning styles" of individuals, today's instructional systems are likely to be built on assumptions about how learners "really do" learn--and about how teachers "really ought" to teach. While such assumptions are sometimes stated quite explicitly in manuals of use, more often they are not, but they may still be found (buried but very much alive) within the materials themselves.

During the last few years, Ira Gordon of the University of Florida, and others working in the general area of instructional theory, have pointed the way to the development of analytical techniques by means of which the range of logical, pedagogical, and psychological assumptions currently being made (both consciously and unconsciously) by the developers of curriculum materials and systems may be clearly explicated. Dr. Gordon's work is being expanded and adopted into an analytical system for use by various university-based curriculum analysis groups that are assisting the Educational Products Information Exchange (EPIE) Institute in its efforts to create impartial assessments of instructional materials.

Using an extension of these analytical techniques, it is possible to throw light on a variety of assumptions now being made about the future economics and staffing of education by the developers of large-scale or small-scale computerized or non-computerized instructional "systems". It is interesting to note that such analytical techniques may also be employed retrospectively, as was done recently by Stanley Rudin in analyzing textbooks of the 1930's.

In addition to this type of "depth analysis" of the internal aspects of instructional materials, it is also possible (thanks in large measure to the

(Komoski's keynote address continued)

development of new technologies of data gathering, processing, and synthesizing) to assess the "external" effectiveness of such materials and systems as used by teachers and students.

Once again, may I say that if it strikes you as presumptuous to devote so much attention to the artifacts of instruction, and to assume that these things actually play or may come to play this formidable a role in shaping our educational future, I can only reiterate that the "operating" objectives of any educational system are likely to be found within its instructional artifacts.

One outcome of this increasing number and variety of instructional artifacts may be that for the first time we are able to examine the objectives operating within our educational enterprises with relative ease and objectivity. If we think for a moment about the famous Jesuit and Oxonian educational systems, we will have to agree that their fame is due not to the subject matter they transmitted or even to the particular teachers they employed, but to the methods of instruction used by those teachers. A careful analysis of both methods would, I maintain, enable us to reconstruct the psychological, pedagogical, philosophical, social, and other assumptions implicit within these two distinct approaches to education. However, while such analyses would be possible, they would hardly be easy, for although these methods of instruction do not rely entirely on intuition, they are primarily transmitted through a process of emulation and apprenticeship and, therefore, have never been systematically ordered to the point where their essential characteristics have been embodied in specific instructional artifacts.

It is quite significant, I think, that the highly intuitive-emulative instructional techniques of the Jesuits and Oxonians were developed prior to the first industrial revolution and the onset of instructional technology. In fact, one way of characterizing the instructional methods that began to appear during the early nineteenth century is to say that they approached the teaching-learning process less intuitively and more systematically than had been done previously. Nor were these characteristics found only within the clearly factory-like "Lancastrian system". We are told, for instance, that during the 1840's a visitor to one of Pestalozzi's early experimental schools said to the Swiss reformer, "I see! You want to mechanize instruction." By way of contrast, one might imagine that same perceptive visitor, looking in on one of today's instructional reformers and remarking, "I see. You want to use technology to do away with mechanized instruction."

Such a comment reflects a major article of faith for many educators who have become convinced of industry's role in contemporary educational reform; i.e., that modern technology gives educators the tools with which they will be able to build new "systems" capable of thoroughly individualizing and personalizing instruction. For these educators, herein lies the enlightened essence of the second industrial-instructional revolution, as well as

(Komoski's keynote address continued)

the basis of a further faith that the growing interdependence of industry and and education will be guided by an enlightened desire to serve the public interest.

Other educators, who may be described as either less enthusiastic or more realistic, are raising questions as to whether such faith is justified. Their questions, it would seem, are prompted by mixed fears that industry will not be able to produce desirable results or, that if it is able to produce them, the fact that industry has done so will somehow put their own life-long efforts to improve education in a poor light. Anyone who doubts the presence of these dual fears need only spend time listening to the "hidden agenda" being discussed between the sessions of any of today's numerous Industry-Education "dialogues". Other concerns frequently voiced at such meetings are that "industry is out to make a profit from education, and educators are increasingly being pressured to buy the stuff that industry has managed to ballyhoo to the public and the government, " and that "no matter how good these new things are, they still must be purchased out of already under-funded local budgets. " Such concerns and feelings are as real and as "now" as teacher militancy or student radicalism, and cannot be discounted. However, they will tend to have a greater effect on the short-range than on the long-range outcomes of the second industrial-instructional revolution. Those long-range outcomes will not be decided by such things as whether or not the feelings of certain educators toward industry can be manipulated, or by whether or not industry's primary aim is to make a profit, nor will they be much affected by acts of faith. For in the long run, the second industrial-instructional revolution will be assessed not only by how well its technology managed to achieve certain educational ends, but also in light of the ends toward which that manifold technology tended to direct the thinking of those who used it! Indeed, we would do well to reflect deeply upon Walter Ong's insight that the most powerful aspect of any technology may well be its potential "for ordering the possessions of the human mind".

Today's instructional technology is clearly more powerful than its primitive nineteenth-century predecessor, and clearly still in its infancy. Yet it is shaping today's education thinking. Given this situation, we would do well not to wait a hundred years or so before attempting to assess it in terms of its effect on individual learners, teachers, and school systems. This is a large task, but a manageable one, if approached cooperatively, systematically, and unfrenetically over time. It is an undertaking that should be organized "for the long pull, " in the knowledge that all concerned (students, teachers, administrators, technologists, manufacturers and the public) will eventually benefit from such an on-going process of assessment.

What is needed for the short run is the determination to carry on curricular (i. e., running) assessments of the educational effects of an immature, yet surprisingly powerful, instructional technology; not for the purpose of damning it, not even for the purpose of directing it (in a unilateral sense), but

(Komoski's keynote address continued)

for the purpose of keeping ourselves intelligently informed of the multi-faceted effects of the artifacts of this technology, and, thus informed, to make responsible professional decisions about the value of specific artifacts and systems.

How is it possible to do this? Surely, the task of carrying on such running assessments of the educational effectiveness of thousands of diverse instructional artifacts in different combinations and permutations is, in a word, enormous. Faced with the present proliferation of books, films, audio and video tapes and devices ranging from the "cassette" to the computer and their combined use as instructional "systems," today's educator may long for the simpler days of the nineteenth century when the statutes of one of today's most educational advanced states warned: "The variety of textbooks on the same subject, acknowledged by all to be one of the greatest evils which afflicts our schools...compels the teacher to divide the pupils into as many classes as there are books... Wherever the superintendents find this...they should not fail to point out its injurious consequences, and to urge a remedy by the adoption of uniform textbooks as speedily as possible." On a recent visit to one of today's most widely praised experiments with the "new technology" the members of a professional commission found that the 25 students in one classroom were making use of 39 different mathematics textbooks, and that each child's progress was being "managed" by a computer located almost three thousand miles away, but which reported to the classroom teacher every night after it had finished scoring and analyzing each child's performance for that day.

As education moves farther toward becoming the major "service" industry with "the world's first service economy," there is every indication that the number of technological options it will produce for servicing the needs of individual learners and their teachers will continue to increase rather than decrease; not unlike the "consumer options" which have continued to increase within the American automobile industry, heretofore the country's major "goods producing" industry. We have only to compare Henry Ford's famous statement in the early days of the automotive business, "Tell the customer he can have any color car he wants as long as it's black" to the statement reported in 1965 by Life Magazine in which "A Chevy official introducing the new models pointed out proudly that the total possible combinations of models, engines, colors and other options would be an astronomical number with 125 zeros!"

If the "education industry" is, in fact, through some sort of irreversible tendency of modern technology going to supply "the educational consumer" with comparable numbers of options (surely an American's educational needs and wants are as varied as his automotive), then how can we possibly keep track of them all and, in addition, trace their cumulative, dynamic effect on learners? The task does, indeed, seem impossible and yet unless it is possible what chance have we of intelligently guiding this admittedly emergent and profoundly important technology toward responsible maturity? Or, to put

(Komoski's keynote address continued)

it less anthropomorphically, "How can we keep tabs on our budding educational technologists, as they try their new tools to be sure that they aren't operationally defining education in terms of the limits of those tools?" Were this allowed to happen, what was to be a new industrial-instructional revolution could conceivably degenerate into an infinitely efficient means of lock-stepping us backward toward an electronic version of its outmoded predecessor. What are the chances of this happening?

Instructional technologists, whether they are employed by industry or by schools, universities, or government agencies, tend to make light of the possibility that their work may somehow abort. (However, the followers of Joseph Lancaster witnessed the Lancastrian method of controlling classroom behavior through the use of praise and inexpensive rewards transmuted by less humane adaptors into a system of carefully ordered corporal punishments.)

But, if we cannot look to the technologists themselves (nor to their deprecators) to undertake the enormous multi-faceted task of assessing our new instructional artifacts, then to whom can the great majority of those who are neither "true believers" nor "non-believers" look to carry out the task? The most responsible, but by no means the easiest answer is that they must look to themselves and join together in a cooperative effort that will create the sort of "positive corrective feedback" needed to shape the course of the second industrial-instructional revolution.

Such a cooperative program might well be undergirded by three admissions: First, that traditional approaches to instruction are inadequate for meeting the individual needs of today's learners. Second, that although at present the new emerging technology of instruction is also probably inadequate for meeting these needs. This new technology, rather than traditional instructional technology, is more likely to fulfill these needs in the future. Third, that our best hope for hastening the day when this emerging technology will be capable of fulfilling the changing educational needs of all Americans lies in the direction of using the new technology as broadly as possible, with as little ballyhoo as possible, and by carrying out responsible on-going assessments of technology's use in everyday teaching and learning situations.

Were the majority of those who are today producing, purchasing, supplying the funds for purchase, and using the artifacts of the new technology to adopt and support these three ideas, the chances that the growing interdependency of industry and education might produce a positive educational effect would be greatly improved.

The most obvious alternative to such a program of broad-range assessment is to have more and more educators feel that they constitute simply another exploitable market in which industry is "out to make a profit," and in so doing, fail to sense their own responsibility to help shape the nature of the growing interdependency between industry and education in American society.

(Komoski's keynote address continued)

A second, equally undesirable alternative would be to have both industrialists and educators play it "safe" by continuing with the mass marketing and use of the traditional materials of mass instruction. There is considerable indication that this latter alternative may, in fact, be adopted. For, as Edward Katzenbach, formerly general manager of Raytheon Education Company, recently put it: "The money is not in the new stuff; it's in the old stuff." As a matter of fact, there are numerous traditionalists within the education and industry "establishment" who are not concerned about developing and assessing the new technology because they feel either that it cannot be made to work or will never be priced so as to compete successfully with the "old stuff" of instruction.

But the ultimate consumer of "the old stuff" (the learner) is growing increasingly restive about what he views as the perpetuation of the "establishment's" mass instructional system, and its inability to meet his individual learning needs. On the other hand, this same learner is apt to prejudge the new instructional systems being developed by the educational technology industry as something that will inevitably "spindle, fold and mutilate" him until he has been reduced to the status of a unit of mass-produced, "trained manpower".

Education's "next to ultimate consumer," the teacher, is apt to be less dissatisfied with "the old stuff" than are his students. However, he, too, is showing signs of anxiety about how "the new stuff" will affect his status as a professional. Out of this mixture of satisfactions, dissatisfactions, and anxieties could come an unfortunate polarization; not (as one might have predicted a few years ago) a polarization of "education" and "industry", but a polarization capable of cutting across and opening deep divisions within the memberships of both institutions. On one side would be those in industry seeking the security of uninterrupted profits and those in education looking for undisturbed professional security; on the other side one would find the industrial and educational entrepreneurs--the risk-takers--who are willing to forego immediate profits and job security in order to shape new economic and new educational opportunities. Were such a polarization to occur (there are those who would say it already has), we would be witness to the interdependency of industry and education operating at two very different levels with two very distinct groups of operators. However, the answer to the critically important question of which of these two operating levels and which of the two groups of operators would be likely to attract the greater support from within the ranks of industry and education and the greater amount of public funds, is not at all clear.

In recent years, of course, the federal government has been betting large amounts of money on the less conservative, less traditional level of this interaction and has, in fact, spent millions of dollars on the development of the new instructional technology. As a result, both industry and education have been reasonably well disposed toward producing and using innovative materials and equipment. However, given the "bad year" which many

(Komoski's keynote address continued)

companies in the education industry have recently experienced, it seems evident that there are not enough federal, state, or local monies available to enable schools to purchase, use, and maintain the more expensive and frequently more complex materials, equipment, and systems of the new technology. It is not expensive to talk about meeting the needs of individual learners, but it is expensive to build and market instructional systems that do, in fact, meet the needs of individual learners. Building such systems requires more than the traditional skills of an author, editor, artist, compositor, printer, and salesman. The "author" may now be a team composed of subject matter experts, developmental psychologists, behavioral technologists, and media specialists; the editor needs to know more than how to work with the printed word, and a great deal more than he used to know about learning; production now requires many more artists and technicians than it once took to produce a textbook; and, last but not least, the salesman must frequently be supported by a team of consultants capable of helping teachers learn to use the new tools of individualized instruction.

Given these added costs, it is clear that "the profit is in the old stuff". It is there because the "old stuff" is made up of less expensively produced products that can be mass produced for a mass market of "average" students. Faced by these hard economic facts, plus the added uncertainty of whether these facts can or will be changed by the appearance of "new" money with which schools may purchase the "new" technology, the immediate future does not look bright for either the producers of this new technology or for its ultimate consumer, the individual learner. This situation represents a profound irony operating within American society, which boasts not simply the "richest" but "the world's first service" economy. And, which, in addition, prides itself on its entrepreneurial spirit and on the ability of that economy to respond to the needs of the individual consumer. The irony is, of course, that this society seems unwilling to undertake the financial risk involved in servicing the most important needs of the most important individuals in its population.

What may be needed to resolve this embarrassing situation is a means of reducing the risks involved. But, of course, there is no sure way to do this. Money will have to be spent, and new systems of instruction produced and used. Some of these systems, and the materials and equipment they contain, will meet the individual needs of students and some will not. And about the only risk-reducing mechanism that could conceivably help both producers and purchasers to discover which is which, would involve the systematic gathering of "corrective feedback" directly from the ultimate consumer, the learner, and from the next-to-ultimate consumer, the teacher. Were such a mechanism to exist on a nationwide scale, the growing interdependent relationship between industry and education might even reach the level where decision-makers within what may one day become the country's largest industry would be able to hear very clearly what the country's most important "consumers" of its most important "product" need and want.

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SECOND GENERAL SESSION

Sunday, August 18, 1968
7:35 p.m.
Presiding: David Crossman

David Crossman

I. Co-chairman David Crossman opened the session with a concrete story about an educational psychologist.

II. A motion was made by John Tirrell to retain the 1968 Okoboji Planning Committee as an Advisory Committee to the co-chairmen. The motion was seconded and approved by the delegates.

III. Seven delegates with current positions in industry were asked by David Crossman to form an ad hoc committee and present their personal points of view to the general session on Monday morning. Committee appointees included: Gordon Tubbs, Chairman; Jeanne Davis, Paul Zuckerman, John Tirrell, Donald Horsman, Calvin Otto, and Howard Hitchens.

IV. David Crossman also appointed a second ad hoc or "observations" committee with membership to include Peggy Sullivan, Chairman; Richard Nibeck, Harry Skornia, and Richard Pfund. Committee members were asked to review the written concerns of conference delegates and the positions taken by the keynote speakers, this review to culminate in a committee attempt to delineate the compelling issues of the conference theme during Monday morning's general session.

V. Mr. Crossman then reported in abstract form his own observations of delegate's concerns:

A. How can we establish a continuing mechanism for the sharing of ideas between industry and education? And what role will government play in this dialogue?

B. Will future software be equal in quality to the emerging hardware and will industry make as great an effort to develop the software as they now seem to exert in developing the hardware?

C. What is the significance of the hardware-software mergers that have characterized the corporate restructuring of electronics and publishing firms?

D. Can the educational market ever be sufficiently profitable for industry? Will educators accept profit as the motivating factor of industry in the development of educational materials? Is profit the only motivation of industry?

E. How can industrialists be encouraged to develop products to fit the needs of education rather than the current practice of attempting to adapt consumer products to educational needs?

F. Should government-funded materials remain exclusively in the public domain and could such a policy stifle the incentive of profit-motivated industry?

G. How can we rearrange the structure of financial support for education in order to afford the complexities of educational technology?

(Second General Session - continued)

H. Considering revision costs and limited sales potential will industry find it feasible to keep industry-produced materials current?

I. Can we and should we reduce all goals to behavioral objectives?

J. Is technology dehumanizing education and if so to what extent can this trend be revised?

K. How can industrial suppliers acquire a better understanding of the educational process, the educational administrative structure, and the role of the classroom teacher? Has industry made a valid attempt to determine the precise needs of teachers and administrators or is it true that "more market research goes into the marketing of a new toothpaste than the introduction of educational packages"?

L. Where do private schools enter in the development of instructional materials and how unique are the needs of these schools?

M. Can industrial management techniques (such as systems engineering) be applied to the management of educational institutions?

VI. Keynote speakers, James Finn and Kenneth Komoski, were asked to come forward to receive questions from the delegates.

VII. Rest was called at 9:15 p.m.

VIII. General session resumed at 9:20 p.m. Marie McMahan distributed procedural instructions for individual presentations (Show and Tell) which delegates might wish to make to other interested conferees.

IX. Questioning of the keynote speakers continued.

X. The second general session adjourned at 9:45 p.m.

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THIRD GENERAL SESSION

Monday, August 19, 1968
8:05 a.m.
Presiding: Arthur Lalime

I. Conferees were called to order by Arthur Lalime.

II. The previously appointed committee of industrial representatives chaired by Gordon Tubbs began a presentation during which the committee members offered some personal viewpoints and then answered questions of the delegates.

Arthur Lalime

Howard Hitchens made two points: first, that industry is not disinterested in or separated from education. Rather, industry is very much involved

(Third General Session - continued)

in the continuing education and training of its own employees, all of whom are products of a prior educational system. And it behooves industry to start with the best products they can get. Second, the so-called communications gap between education and industry has been grossly exaggerated.

Gordon Tubbs told the delegates that industry now spends $27 billion for education and training while schools and colleges expend $43 billion. Expenditures by industry are rising at a faster rate than expenditures by schools and colleges. If the current trend continues, by 1974 expenditures by industry will pass the expenditures made by traditional educational institutions. Schools and colleges are only one segment of the educational market and we ought to keep this thought in perspective when we ask industrial representatives, "Why don't you make specific products for the schools?"

Jeanne Davis spoke of the need for curriculum change and the two methods by which this can be done, "We can have sweeping reform--throw out the old, bring in the new, or we can effect change by subverting the existing curriculum --take the curriculum in use and create something around it." Miss Davis expressed a personal preference for the latter technique. She compared sweeping reform with the "great potential" platitude in which experts tell what can be done but concrete change never seems to take place.

Paul Zuckerman said it was only during the previous evening that he began to grasp the extent of the problem between manufacturers and educators. Educators seem to express the belief that software manufacturers are randomly producing gobs and gobs of materials and are trying to push it off on the educators. "If this is really a problem, I can't help but feel that the fault lies with the educators. These people are supposed to be experienced in selecting materials based on careful evaluation, either their own evaluation or somebody elses. If you buy something that doesn't work, you must assume responsibility. You should have, if you don't already, a very elaborate system of evaluation and testing so you know what to recommend to the teachers in your school district."

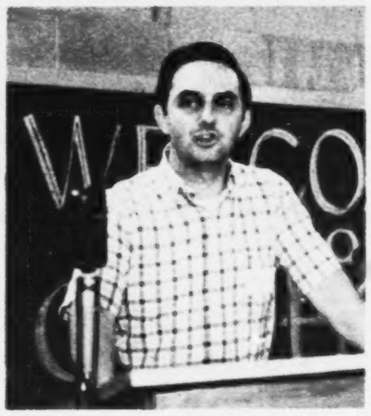
Calvin Otto told delegates that much of industry's involvement in education came not from intent but from necessity. He described the educational courses offered by industrial firms as gap-filling ventures designed to meet a need not filled by educational institutions.

III. Chairman of Rest, Vernon Gerlach, called a temporary halt to proceedings at 9:10 a.m. James Finn recited a suitable limerick which he had composed for the occasion:

(Third General Session - continued)

A psychologist named Vernon Gerlach,
Is a sort of grandfather's clock.
There's a thing on his chest,
He raps for our rest;
He would even shut up Doctor Spock!

IV. The industrial representatives resumed their presentation at 9:15 a.m.


John Tirrell

John Tirrell described an industry-education partnership in which General Learning Corporation worked with the University of Pittsburgh and the Pittsburgh Public Schools on a special project for disadvantaged youth. "Unfortunately educators look to industrialists as a source of money--a free ride. Industry can and should provide expertise as well as money in a partnership of this sort." Mr. Tirrell discussed also the status of current software. "Many of today's products are industry generated. This will be less true in the future. Manufacturers are discovering that industry-generated materials do not have the greatest long-term return on their investment. The greatest investment potential lies in the development of need-response materials, materials which respond to the needs of the educational client." Some of the elaborate hardware currently in production was termed "a solution looking for a problem" by Mr. Tirrell. "Let's start with the problem first and then develop the solution."

Don Horsman spoke on software developmental procedures and gave the delegates a resume of the steps employed by Westinghouse Learning Corporation in the production of a systemized package for self-instruction in welding. "Basically we observed a master welder and asked him to describe every step of the task he was performing. Then a behavioral psychologist transformed the words of the welder into basic instructions for the neophyte student. Later the process was repeated with other master welders to note variations of technique and to revise student instructions accordingly.

V. Recess at 10:00 a.m.

VI. Reconvene at 10:15. Delegates posed questions for discussion by the panel of industry representatives.

Gordon Tubbs observed that "very few materials are learner oriented; most are teacher oriented. If we really wish to implement self-instruction, we must change the orientation of our materials."

The industry panel concluded their discussion at 10:50 a.m.

(Third General Session - continued)

VII. The "observations" committee chaired by Peggy Sullivan reported an analysis of the delegates concerns and listed ten topics which the conferees might consider for further discussion. These included:

1. Is dehumanization inevitable?
2. Cooperative community relations
3. Mechanism for continuing dialogue
4. Standards and how great is the need?
5. Private and parochial schools and their role in the industry-education dialogue
6. Defining the roles of industry and education
7. Defining the educational market
8. Relevance of current hardware and software to the needs of education
9. Defining success for education and for industry
10. Preserving local options in the educational process

After some discussion, a consensus was reached among the delegates to form six study committees and to redistribute the ten concepts listed above as follows:

A. Topics one and nine
B. Topics two and three
C. Topics five, six, and seven
D. Topic eight
E. Topic ten
F. Topic four

Delegates were asked by the co-chairmen to choose one of the six study committees and to meet with temporary committee leaders at 1:30 p. m.

VIII. Marie McMahan distributed a schedule of individual delegate's presentations ("Show and Tell") to the conferees.

IX. David Gifford requested press release forms from all delegates who had not previously turned them in.

X. Delegates expressed with applause their appreciation to keynote speakers James Finn and Kenneth Komoski, both of whom had to leave the Okoboji Conference that afternoon.

XI. Third general session was dismissed at 11:55 a. m.

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FOURTH GENERAL SESSION

Monday, August 20, 1968
7:35 p.m.
Presiding: David Crossman

I. After calling the conferees to order, David Crossman asked a representative of each of the six study committees to give a brief progress report. These reports were made by Jude Cotter, Calvin Otto, William Oglesby, Robert Gerletti, Charles Daly and Charlie Roberts, representing committees A through F respectively.

II. Two minutes of rest at 8:10 p.m.

III. Delegates were urged to write up and turn in potential resolutions to Robert Gerletti, chairman of the resolutions committee.

IV. Richard Nibeck and Robert Gerletti reported the recent activities and pending business of the DAVI Executive Committee.

V. Rest at 8:55 p.m.

VI. Resumed at 9:05 p.m. with a very brief report from Howard Hitchens concerning the anticipated work of the Commission on Instructional Technology, a special commission appointed by Secretary of Health, Education and Welfare, Wilbur Cohen and chaired by former USOE Commissioner, Sterling McMurrin. Lt. Col. Hitchens and DAVI Associate Executive Secretary, Robert Snider, will serve as professional staff members for the commission.

VII. David Crossman reminded the delegates that they would meet in individual study committees Tuesday morning and afternoon and return to general session for preliminary reports at 3:30 p.m.

VIII. Fourth general session adjourned at 9:15 p.m. but delegates were encouraged to remain for post-session "Show and Tell."

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IX. Warren Randall projected slides of a float conference attended by media specialists from Iowa, Illinois, South Dakota, Nebraska, and Wisconsin.

X. Edward Dawson gave a tape-slide presentation which explained the activities of the Somerset County (New Jersey) Title III Media Center.

XI. Richard Pfund made a slide-illustrated report on the planning, construction and anticipated utilization of the Learning Resources Center, State University College, Oswego, New York.

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FIFTH GENERAL SESSION

Tuesday, August 20, 1968
3:15 p.m.
Presiding: Arthur Lalime

I. Harry Skornia was asked to assume the appointment as Chairman of Rest replacing Vernon Gerlach who had to leave the conference.

II. Lee Campion, chairman of a special committee to evaluate the Okoboji Conference, distributed an evaluation form and urged all delegates to complete and return the form to committee members by Wednesday noon.

III. A revised schedule of "Show and Tell" presentations was distributed by Marie McMahan.

IV. Three preliminary or progress reports were made by Jude Cotter, Calvin Otto, and William Oglesby representing Study Committees A, B, and C respectively.

V. Rest at 4:25 p.m.

VI. Reconvened at 4:35 p.m. Robert Gerletti presented the preliminary of Committee D.

VII. Theodore Henry moved that the general session discontinue preliminary reports and adjourn until Wednesday morning. The motion was seconded, discussed and defeated.

VIII. Preliminary reports for Study Committees E and F were presented by Theodore Rothwell and Charlie Roberts respectively.

IX. Adjournment was at 5:15 p.m.

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SIXTH GENERAL SESSION

Wednesday, August 21, 1968
11:05 a.m.
Presiding: David Crossman

I. Three musical renditions by the Arnolds Park Gospel Singers opened the session.

II. Delegates were urged to return their Okoboji Conference Evaluation Forms to Lee Campion or Howard Hitchens before lunch.

(Sixth General Session - continued)

III. David Gifford was asked to chair an ad hoc committee to recommend a topic for the 1969 Okoboji Conference. Other committee members appointed were Peggy Sullivan, Howard Hitchens, Robert Gerletti, Calvin Otto, Richard Pfund, and Charlie Roberts. Cards were distributed to each of the delegates with the request that they write down suggested topics and return the cards to committee members.

IV. Two "Show and Tell" demonstrations were selected for presentation during this general session because of the interest expressed by many delegates.

A. Arthur Proulx demonstrated two prototype projectors under development by the 3M Corporation. The first prototype was a transparency cartridge projector which he labeled the "automatic overhead." A sound slide projector, the second prototype, utilized a 35mm slide mounted in a special frame containing a magnetic audio track for synchronous narration.

B. Gordon Tubbs exhibited Eastman Kodak's new MFS-8 projector which combines filmstrip and motion picture techniques in a single projector. The film can be programed for individual instruction.

V. Richard Nibeck reminded the delegates to submit potential resolutions to the resolutions committee for review and consideration.

VI. Delegates indicated their desire to spend the first half of the afternoon in study committee sessions. The sixth general session adjourned at 11:55 a.m.

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SEVENTH GENERAL SESSION

Wednesday, August 21, 1968
3:15 p.m.
Presiding: Arthur Lalime

I. Second drafts of committee reports for Study Committees A, D, E, and F were distributed to all delegates. Second drafts for committees B and C were distributed to the delegates after the general session adjourned. Concensus dictated that all reports be given initial review by the delegates in study committee groups rather than in general sessions.

II. Revisions in professional growth scheduling ("Show and Tell") were announced by Marie McMahan.

III. Jude Cotter moved that the forthcoming evening general session be scheduled at 7:00 p.m. rather than 7:30 p.m. Seconded and approved.

(Seventh General Session - continued)

IV. Delegates adjourned from the general session for Study Committee meetings at 3:30 p. m.

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V. Post-session "Show and Tell" presentations began at 5:00 p. m.

A. Lee W. Cochran presented transparencies now available for in-service training which illustrate research conducted in educational media.

B. Arthur Lalime exhibited teacher-made, industry-produced audio tape packages available for elementary instruction in a variety of subject areas.

C. Paul Zuckerman projected slides which illustrated exhibits produced for medical education.

VI. Post-session adjourned at 5:45 p. m.

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EIGHTH GENERAL SESSION

Wednesday, August 21, 1968
7:40 p. m.
Presiding: David Crossman

I. Arthur Lalime and David Crossman explained that they had exercised their prerogative as co-chairmen in re-scheduling the general session because of the excellent progress made by the Study Committees in reviewing the written reports of one another during the afternoon.

II. The Arnolds Park Gospel Singers intoned three musical selections for the delegates.

III. A cry of disbelief greeted the announcement that a delegate volleyball team had won their first game in two years by defeating the cooks, 15-8.

IV. Delegates proceeded to the key business of this session, final approval of the six Study Committee reports. David Crossman asked that during discussion of the reports all questions and comments be made first by one person representing each committee and then discussion would be open to the floor.

(Eighth General Session - continued)

V. Charlie Roberts, chairman of Committee F (Criteria), presented the final report to the delegates. After discussion the report was approved as amended. (Note: All Study Committee reports have been included in this Summary Report and begin on page 45 following the Conference Resolutions.)

VI. Rest was called at 8:30 p.m.

VII. The delegates reconvened at 8:35 p.m. to take a sobriety test administered by Eugene White. Test results have not and will not be released.

VIII. Richard Pfund, co-chairman of Committee E (Providing Options in Education through Media), submitted his committee's report to the conferees. George Phillips questioned the terminology used in the definition sections of the report. A motion to substitute a definition offered by Mr. Phillips for that contained in the report was made, seconded, and then tabled by a supplementary motion.

IX. John Wilshusen moved that representatives from Committees B, D, and F meet with the members of Committee E outside the general session to resolve differences and reach concensus in the meaning and phraseology of Committee E's report. Seconded and approved.

X. Robert Gerletti, chairman of Committee D (Adapting Instructional Materials and Equipment to an Era of Change), presented his committee's report to the delegates for discussion and revision. Howard Hitchens moved that Committee D's report be accepted as amended. Seconded and passed.

XI. Rest was called at 9:45 p.m.

XII. Committee C's chairman, William Oglesby, presented his group's report (Roles for Education and Industry), at 9:50 p.m. A motion by John Wilshusen to accept the report with alterations was seconded and passed at 10:10 p.m.

XIII. Committee chairman Calvin Otto offered Committee B's report (Continuing Education-Industry Forum), to the conferees for consideration. The report was adopted as modified at 10:50 p.m.

XIV. Jude Cotter, chairman of Committee A (Technology and Dehumanization), presented the committee's report to the delegates for discussion and approval.

XV. Rest was called at 11:15 p.m. Conferees reconvened at 11:20 p.m.

XVI. A motion by Kent Gustafson to accept the report of Committee A was seconded and passed.

(Eighth General Session - continued)

Theodore Rothwell clarifies a point in the report of Committee E.

XVII. Richard Pfund, Committee E co-chairman, presented to the delegates several revisions of his committee's report.

XVIII. George Phillips' earlier motion to substitute a different definition for option than that contained in Committee E's report was brought to the floor from the table. This motion stated that: "Option be defined as the power, right, or liberty of choosing a variety of media, techniques, and contents to meet specific educational needs." The motion was defeated.

XIX. A motion to accept the amended report of Committee E was seconded and approved by the delegates.

XX. Howard Hitchens moved that Study Committee reports be placed in the following order when published in the 1968 Summary Report:

1. Committee C: Roles for Education and Industry
2. Committee E: Providing Options in Education
3. Committee A: Technology and Dehumanization
4. Committee D: Adapting Instructional Materials and Equipment to an Era of Change
5. Committee F: Criteria
6. Committee B: Continuing Education-Industry Forum

Seconded and approved.

XXI. The eighth general session adjourned at 11:45 p. m.

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NINTH GENERAL SESSION

Thursday, August 22, 1968
8:15 a. m.
Presiding: Arthur Lalime

I. Lee Campion, chairman of the Okoboji Conference Evaluation Committee, presented the committee's report. Briefly, the report viewed the Okoboji Conference favorably and recommended that the conference continue on an annual basis as in the past. (A written report which delineates the views of the evaluation committee is printed in Appendix A of this Summary Report.)

(Ninth General Session - continued)

II. A motion to hold an Okoboji Conference in 1969 was made by Harry Skornia, seconded by Marie McMahan, and approved by the delegates.

III. A motion requesting that the President of DAVI appoint a planning committee to prepare for the 1969 Okoboji Conference was made by Jerry Linker, seconded by Kent Gustafson and passed by the conferees.

IV. Harold Hill moved that seventeen (17) of the 1968 Okoboji Conference delegates be invited to attend the 1969 conference so that experience and continuity can be carried from year to year. The seventeen delegates would include the 1968 co-chairmen and fifteen other delegates to be selected by ballot. (Ballots will be mailed to 1968 delegates who will indicate which fifteen of their cohorts should return in 1969.) This motion was seconded by Charlie Roberts and approved by the delegates.

V. Resolutions Committee chairman, Robert Gerletti, distributed copies of resolutions reviewed and recommended by his committee for endorsement by the conferees. An amendment to insert phraseology into one resolution and add an additional resolution to the report was ratified by the delegates. The amended resolutions were then approved by the delegates (and are printed in this Summary Report immediately following these minutes.)

VI. David Gifford reported that his ad hoc committee for selection of a 1969 Okoboji Conference theme had reviewed some thirty topics submitted by conferees and boiled these down to five possible themes. After discussion of the themes ballots were distributed and delegates were asked to indicate their preferences.

VII. Presiding co-chairman Arthur Lalime passed the gavel to co-chairman David Crossman at 9:20 a.m.

VIII. Four delegates from outside the continental United States, Canada's Nick Spillios, Carlota deRamirez from Puerto Rico, Ely Gomez from the Philippine Islands, and Britain's Hillary Perraton, were honored by the conferees.

IX. Rest at 9:35 a.m. Reconvened at 9:50 a.m.

X. Lee W. Cochran made three points concerning the publishing of the 1968 Summary Report: 1) the report is to be considered a working paper rather than a formal statement and this fact will be noted on the cover page of the report; 2) the delegates' "concerns" will be included in an appendix of the report; 3) reprints of periodical articles distributed to the delegates during the conference will not be included.

XI. Arthur Cowdery moved that the Iowa Committee be authorized to sell copies of the 1968 Summary Report to non-delegates for a nominal fee.

(Ninth General Session - continued)

(All Okoboji delegates, past and present, receive one complimentary copy of the Summary Report. The fee for additional copies and for non-delegates who request copies has been set at $1.50.) The motion was seconded and approved.

XII. Delegates assembled on the porch of Mahan Hall for a group picture at 9:55 a.m.

XIII. Results of the voting to indicate preferences for a 1969 Okoboji Conference theme were announced by David Gifford and Richard Pfund.

1969 OKOBOJI THEME BALLOT

		Number of votes
1.	Media and Urban Education	11
2.	The Education, Re-education, and Role of the Media Specialist	7
3.	The Media Para-professional; Needs, Role, and Training	1
4.	Curriculum Structuring and Instructional Development to Meet Changing Needs	11
5.	The Implementation and Refining of the Joint AASL-DAVI Standards for School Media Programs	7
6.	A combination of topics one and four	16

Final determination of a 1969 theme will be made by the planning committee on the basis of delegate preference, availability of resource personnel, and other factors which may occur during the intervening period.

XIV. Conference summarizer, Gordon Tubbs, presented the following summary to the delegates

CONFERENCE SUMMARY

August 22, 1968

Gordon Tubbs

Conference Summarizer Gordon Tubbs

We arrived at Okoboji with our minds full of questions--questions about why am I here--what will we do--who is that fellow next to me???

It didn't take long for us to feel the radiant technology of Lee and Lida Cochran and the Iowa Committee take effect--we got to know those fellows around us in a solid way we hadn't dreamed possible. Our thoughts were many as we listened to our keynote speakers, James Finn and Kenneth Komoski. Suddenly we discovered that our thoughts about an education and industry dialogue were refocused and enlarged. We realized that problem assigned was a profoundly serious one. James Finn made us aware of the new conditions presented to us by our wonderous, but in many ways terrifying, scientific and technological revolution--a revolution, by the way, that education has had a considerable hand in fashioning. The consequences of this revolution, however, have included some social economic and human problems for which both education and industry were ill-prepared.

Dazzeling as achievement may be in the area of technology, from human spare parts surgery to traveling to the moon, we know that education cannot save itself by simply rubbing the "magic lamp" of technology.

We have reached the conclusion that industry and education share concern and responsibility toward the problems of education. These very problems seem to require more technology not less; and a strengthened dialogue between education and all of industry must continue.

The problems we face in fulfilling our responsibilities perplex us. The stake in the solution of these problems is high--nothing less than the future of excellence in education and a hopeful reduction in the "slag-heap" as Komoski pointed out.

We must pioneer in ways to make education-industry dialogue come alive. Clearly, if we can solve the problem of proper relationships in the educational media field, we will have gone a long way toward solving the problem of relating education-at-large and industry-at-large.

Stated differently, if we cannot demonstrate through leadership in the educational media field the power of our reflections, of our inquiries of one another here, of our judgments based on knowledge and action to make meaningful dialogue come to pass, then the hope for the great dreams and efforts of past, present and future Okobojians is slight.

Our greater vision, our necessary vision, is the penetration of the barriers we have identified. Our discoveries of the conditions for meaningful education-industry dialogue must be made known to all. The dynamic human relationship we have experienced in the past few years has made each of us resolve to use our experience to take back to our respective state and local groups the knowledge and motivation to carry on the dialogue.

We leave Okoboji now with great respect for the Iowa Committee and DAVI--most especially to Lee and Lida for their efforts in involving all of us in understanding and acquiring respect for our true roles as the leadership of one of education's most important fields.

Thank you and Umgowa!

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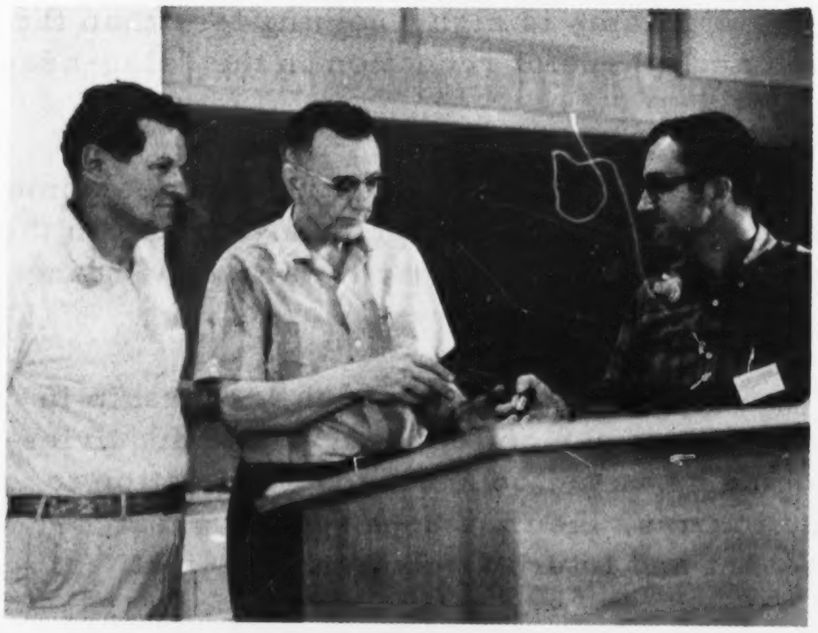
(Ninth General Session - continued)

XV. Presentation of a $40 graduate student scholarship provided by Betty and Francis Noel was made by Harold Hill, chairman of the 1968 planning committee. The scholarship provides for renumeration of Okoboji Conference fees and is awarded by the planning committee to the graduate student delegate who best fulfilled two criteria: 1) contribute to the success of the conference, and 2) demonstrate leadership potential in the media field. John Wilshusen was the recipient of the $40 award.

XVI. Harry Skornia returned the symbols of his authority as "chairman of rest" to the conference co-chairmen. Arthur Lalime and David Crossman then conferred upon Mr. Skornia the honorary designation, Chairman of Rest Emeritus, in recognition of his outstanding performance of duties during the 1968 conference.

XVII. The legend of Um-ga-wa was explained by Harold Hill who displayed the Indian headdress, beads, and insignia of his office as "Keeper of the Word." Also exhibited was the Um-ga-wa flipper, a hand-carved precision instrument presented to the conference by Al Rosen, a 1967 Okoboji Conference delegate.

XVIII. Conference co-chairmen David Crossman and Arthur Lalime returned the presiding gavel to Iowa Committee chairman, Lee W. Cochran, for safekeeping until 1969. Conferees gave David Crossman and Arthur Lalime a standing ovation in recognition of their performance as co-chairmen.



Arthur Lalime, Lee Cochran and David Crossman

XIX. Lee W. Cochran expressed his personal appreciation to the delegates for attending the conference and making it a success. He then declared the conference adjourned at 10:30 a.m.

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FINAL COMMITTEE REPORTS AS REVISED:

RESOLUTIONS COMMITTEE REPORT

I. RESOLUTIONS OF APPRECIATION:

A. The members of the Fourteenth Lake Okoboji Educational Media Leadership Conference hereby express their sincere appreciation for the hospitality of The University of Iowa at the Iowa Lakeside Laboratory and the co-sponsorship of the Department of Audiovisual Instruction of the National Education Association. Gratitude is expressed to President Howard R. Bowen; Dean Robert F. Ray, Division of Extension and University Services; Lee W. Cochran, Director, Audiovisual Center; John R. Hedges, Associate Director Emeritus, Audiovisual Center; Lida M. Cochran, College of Education; Robert A. Long, Associate Director, Audiovisual Center; David Little, Norman Felsenthal, Warren Haffner, James A. Kent, Devore E. Killip, and Eldon F. Walton of the Iowa Committee.

The members also express their appreciation to Richard V. Bovbjerg, director; Tanya and Robert Benson, resident manager, Barbara and Dave Fredericksen, Marlene and Harvey Blankespoor, Meg Caldwell, Connie Peterson and to all the Iowa Lakeside Laboratory staff.

B. The Planning Committee for the Fourteenth Lake Okoboji Educational Media Leadership Conference, chaired by Harold Hill receives our vote of thanks. Committee members were: Peggy Sullivan, Howard Hitchens, David Crossman, Edward Dawson, Richard Nibeck, Irene Cypher, and John Barson.

C. The members extend their thanks to Co-Chairmen David Crossman and Arthur Lalime for the able leadership and guidance throughout the conference.

D. The conference extends its appreciation and thanks to Dr. James D. Finn of the University of Southern California for presenting the conference keynote address.

E. The conference extends its appreciation and thanks to Dr. P. Kenneth Komoski of the Educational Products Information Exchange for presenting the conference keynote address.

F. The conference extends appreciation for excellent graphic arts service to Donald Lacock and David Little and for the superb secretarial service to Ann Clark.

G. The conference has been greatly enriched by the presence and viewpoints of those coming from extra long distance, particularly Ely Gomez, graduate student from the Philippines; H. D. Perraton, England; N. G. Spillios, Canada; and Carlota Johnson de Ramirez, Puerto Rico.

(Resolutions Committee Report - continued)

H. The members wish to thank the industrial and educational organizations that sent delegates to this conference.

II. RESOLUTIONS OF RECOMMENDATIONS:

A. It is recommended that our appreciation be extended to editor-in-chief Leone H. Lake for her editorial leadership in the publication of our conference newspaper for the eighth successive year. Thanks also to the editorial staff Charlie W. Roberts, John Lauria, Lester Harvey and Harold Hill.

B. It is recommended that reports of this conference be sent to members of the Board of Directors of DAVI for use at their discretion by any committees or commissions or agencies that are concerned with the topics and deliberations of this conference. It is further recommended that reports of this conference be sent to DAVI affiliate organizations, other selected audiovisual groups, and selected industrial organizations for appropriate use.

III. RESOLUTIONS FOR ACTION:

A. Be it resolved that the 1968 Lake Okoboji Educational Media Leadership Conference recommend to the DAVI Board of Directors:

1. That the Board of Directors of DAVI continue to support and actively assist in the work of Committee PH_7 of the United States of America Standards institute;

2. That the Board of Directors of DAVI continue to support and actively assist in the work of EPIE;

3. That the Board of Directors of DAVI take all possible steps to encourage the establishment of a clearing house for the testing of instructional materials and equipment;

4. That the Board of Directors of DAVI be urged to endorse the aims of the Commission on Instructional Technology;

5. That the Board of Directors of DAVI continue to support and actively assist in the operation of the Lake Okoboji Educational Media Leadership Conference.

B. Be it resolved that the 1968 Lake Okoboji Educational Media Leadership Conference recognizes that the educational establishment becomes more responsive to the technological nature of the society it serves.

(Resolutions Committee Report - continued)

Committee Members:

Robert Gerletti, Chairman
Richard Nibeck
Harry Skornia

* * * * * *

STUDY COMMITTEE REPORT #1

DEFINING ROLES FOR EDUCATION AND INDUSTRY

I. Introduction

A. The Problem

Change in any age is inevitable. Change in our age is incredible! Spurned by post-war political and scientific events, we find ourselves confronted with the problems, opportunities, and responsibilities of an almost exponentially accelerating technological society.

A major problem in adapting to change is identification of the roles that people and institutions must play. Traditionally, education and industry have been thought of as separate and sometimes contradictory institutions; education being regarded as "humanitarian", and industry as "materialistic" and "profit-seeking."

Such a notion is an overgeneralization; one which, in our day, is no longer a neat dichotomy. Industry educates, and education produces. There exists today an intertwining of goals and process--an unmistakable interdependence of producer-consumer roles.

Technology has provided new tools for instruction. New patterns of curriculum design - improved systems in management and production processes - have all contributed to a new era of educational affluency.

Because of this interdependency and overlapping of functions, it is extremely difficult to differentiate the roles of industry and education. The purpose of this report is to provide operational definitions, and to distinguish areas of commonality and of uniqueness, for the continuing dialogue between education and industry.

(Study Committee Report #1 continued)

B. Basic Definitions

1. What is Education? Formal education is the modification of behavior through structured learning situations. Educators are that segment of our society who devote the bulk of their productive efforts toward activities that result in planned changes in behavior. Those contexts in which education occurs include, but are not limited to: formal public and private schools, both elementary and secondary; colleges and universities; and military, professional and industrial training.

2. What is Industry? Industry is the application of skills and resources to the production and distribution of goods and services. The people of industry are those who use capital, plan and organize the system and work within it. The contexts in which industrial activities occur include, but are not limited to: raw material procurement; manufacturing plants, distribution, market research and product design, marketing, servicing and training.

II. Roles Common to Industry and Education

A. Seeking new technology

The dynamism of the industrial sector depends on the development of various products of applied scientific knowledge; hence, the rather extensive research and development activities within industry. Although the conservatism and resistance of education to change has become a cliche, it is apparent that education must use the best products of our society's technology to improve itself. Traditionally, it has been the role of the media person or technologist in education to seek out and introduce into the educational process those aspects of the developing technology which are most beneficial and appropriate. At present, a significant amount of industry's market-seeking activity is devoted to probing within education to both assist in solving learning problems and expand its markets.

B. Helping humans to adjust to their society

With the options which technology makes available to education, it is possible to tailor the educational process to a learner by finding and utilizing the instructional materials that will most effectively and efficiently teach him as an individual. The "one-mold" style of instruction that rejected those people who wouldn't fit into it is becoming a "thing of the past", for it is now within the capacity of education to make individualized instruction possible. Industry is beginning to train in areas which have been neglected or defaulted by our schools. As dialogue regarding these problems becomes a reality, education and industry will be able to reflect upon each other's and society's needs and to cooperate for the total education of individuals so that remedial programs can be minimized.

Education must evaluate and adjust curriculum to more rapidly reflect the advances of technology. (A current example might be understandings about computers.) Even if a person is educated and able to be productive in our society, the rate of change in our lives makes continual, life-long readjustment and learning necessary.

C. Conducting instruction/learning activities, including remedial and continuing education

Both industry and education are heavily committed to providing learning experiences. Education has traditionally introduced the individual to formalized learning experiences.

Industry, on the other hand, has been concerned with individuals after they have left the educational system, providing primarily job training. The growth of the educational needs of individuals has left both education and industry in a situation where neither can provide all of learning experiences an individual should encounter. Education has extended its realm upward and outward, but not fast enough. Industry has expanded from job training to a full range of remedial and continuing learning programs. Recently, industry has begun to devote a portion of its effort and expertise to providing the early learning experiences formerly provided exclusively by educators. A realistic appraisal of the educational needs of individuals reveals that education and industry must be more concerned with educating for a technological society.

D. Cooperating in research and development

Pure and applied research are distinct characteristics of technological societies such as ours. Industry as well as education has been proliferating research to find prompt and better answers to the problems of educating and training great masses of people. There has been an interchange of ideas, information and personnel which has benefited both sides. In some instances, this sharing of efforts has promoted a sense of cooperation and interdependency, in other instances it has been more superficial. Some semi-industrial organizations which have done commendable work in producing and sharing the benefits of research include: EPIE (Educational Products Information Exchange), ERIC (Educational Research Information Centers), SIRS (School Information Research Services), and PLS

(Professional Library Service). But these efforts are unusual. Continuous germaine work in the field of research and development of new ideas, materials, machines and procedures demand much more than what has been done up to now.

E. Managing Production Processes

Both the education and industry sectors do manage processes in order to produce an end product. Although we generally think of industry as producing "hardware", it is possible for its product to be otherwise. For instance, the education process itself can be thought of as an industry, since it results in a product--"learning". When this notion of education as an industry is elaborated, it becomes obvious that the management procedures and techniques of industry should have applicability in education. At the very least, the development of sound, effective management techniques peculiar to education must be attempted.

III. Comparing the Emphasis Given to Various Roles by Education and Industry

A. Roles emphasized by education	B. Roles emphasized by industry
1. Education emphasizes research in human behavior, and the teaching-learning process. Too often, the results of this research are not applied to the tasks of education. Theory must be translated into practice.	1. Industry emphasizes research in products and services, markets, and in operational functions.
2. Education seeks markets for its product: employable graduates. Educators must be increasingly attuned to the needs of the world of work. It must strive to be continually responsive to demands for a generalized labor market.	2. Industry seeks markets for its products: materials and services. Market research is conducted to determine the ability and willingness of consumers to accept new products.
3. Education derives its motives from the need for adapting, enriching and perpetuating the culture of our society. Its profits are people who achieve a useful and self-fulfilled life.	3. Industry derives its motives and incentives from the capitalistic system of economics which requires that industry conducts its affairs and decides its perpetuation with respect to the profit motive. Industry is also becoming increasingly aware of its role as a corporate citizen; and as such is engaging in welfare programs of all kinds for employees and community.
4. Education strives to educate with efficiency, but often falls short of maximizing its human and capital resources. Education must embrace a conscious and concerted effort to become more rigorously accountable for its activities.	4. Industry is required to accept responsibility for its products; it stands or falls on the acceptance of its products and services. Products and services are changed and industry is changed in order to bring the output in line with the demands of those segments of society it serves.

(Study Committee Report #1 continued)

5. Education evaluates and restructures curriculum and management techniques to reflect changing societal demands. However, it is imperative that educators make a conscious effort to dispell mediocrity and to explore and adopt these appropriate concepts of operations research. It is equally imperative that education be able to define its objectives and methods. Only when this is achieved can a true and meaningful dialogue occur.	5. Industry must continue to define the educational roles it is willing and competent to perform. Industry should also devote a portion of its effort to collecting ideas from education as to the needs that educators feel industry is uniquely suited to perform. It must be recognized that industry already performs this function to some extent but should expand its efforts.

Committee Members:

William Oglesby, Chairman
Ruth Willett, Recorder
Gordon Blank
Howard Hitchens
Jerry Linker
Carlota Johnson deRamirez
Paul Zuckerman

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STUDY COMMITTEE REPORT #2

PROVIDING OPTIONS IN EDUCATION THROUGH MEDIA

I. Introduction

Life is a continuous reconfiguration of the individual. As a child progresses through the educational process, careful attention must be given to generate conditions for nurturing curiosity and leading to the organization of meaning by the individual. The school must release rather than restrict the child's desire for learning and continually open new possibilities to him.

Confining concepts may result from a rigid system which lacks continuous options and evaluation of its elements. This leads to stagnation. The learner must become comfortable with new elements so that he can restructure them to best contribute to "his" developmental patterns. He must have the opportunity to create the perceptual structures appropriate to the development of his own unique potential.

Therefore, the right of choice within this framework is an inherent and essential consideration in the industry-education dialogue.

II. Definition and Classification of Options

A. Definition

An option is the prerogative to select and utilize a variety of media and techniques to meet specific educational needs.

B. Types of Options

Essentially there are two types of options that may be exercised at any level.

First are content options. What facts, opinions, concepts, and data will be made available to the learner? Organizations, sequencing, and level of difficulty are also included in this category. The learner's interests also necessitate content options to maximize motivation.

Second are strategy options. How will the individual learn the content? What teaching techniques, such as lecture, demonstration, and discussion or learning techniques such as programed instruction and independent instructional study are appropriate. Other strategy options are necessary in the area of equipment and materials. The amount and type as well as the order in which these techniques are employed are all strategy options.

C. Levels at Which Options May Be Decided

The selection of an option in either content or strategy represents a decision derived from a particular goal. The decision makers are many and the goals are precluded by prior decisions and goals made at another level.

Because we believe in the importance of the student as an individual learner, we place him first in our recognition of his role as a decision maker in the selection of options. But we recognize that most of his options must be related to the need to concur with the decisions and goals prescribed by the teacher. There are times when an individual is confined in his initial options because of decisions and goals exercised by the local administrator who in turn must respond to the guidelines established by district, state, and in a few cases, national administrative agencies.

We also recognize the existence of both community and special interest groups and the role they sometimes assume in the constriction or expansion of options in education. It is not always clear,

(Study Committee Report #2 continued)

however, where these community and special interest groups exercise influence in the decision-making hierarchy. It seems most accurate to say that these groups can and do influence the selection of educational options at each of the first six levels of options listed below:

1. Students
2. Teachers
3. Local administrator
4. District
5. State
6. National
7. Special Interest groups
8. Community

III. Why Have Options?

Prerogatives to select or modify exist even in the most tightly structured situations. In a free society options confront us at every turn and we sometimes tend to defer those options which logically belong to us, to another level. For educational and industrial personnel to be effective in education we must pick up the appropriate choices for our level of operation and exercise these. A free society not only forces us to recognize our options but to assume responsibility for them and to expand them to their fullest: i. e., the teachers are not restricted to exercising options relative to the development of curriculum and the materials to be used; as professionals they also have free choices in their direct interactions with students, parents, colleagues, administrators, the community and professional organizations. We could go on to other options because this is not a two-sided coin but a multifaceted coin. Use of options depends on the willingness of the individual to accept them, put them into action, and be accountable for the outcomes.

Certain limitations exist and we must also recognize these. The constraints depend upon the extent to which certain options are shared or delegated among the levels mentioned above.

The following are areas in the educational spectrum where options should be exercised:

A. To accommodate individual differences: These are related to all levels and closely influence freedom to have options.

B. Motivation: Content and strategy in instruction and learning should be stimulating and exciting, creating a desire to go beyond initial experience.

C. Release Creativity: Choices made in selection and use of media should encourage direct learning experiences in new ways.

D. Feeling of involvement: Encourage broad participation on all levels of decision-making in choosing media and equipment for more effective learning.

E. Academic Freedom: Maintain the rights of those involved in instruction and learning to maintain and increase freedom.

F. Logistical differences: Decisions in the designing and selection of facilities, equipment and materials influence future choices. Standardization may initially widen the range of options by making more sources available, but there is a danger that extensive standardization may inhibit technological innovation.

G. Updating materials: A wide selection of choices will ensure the learner the most advanced media and equipment available.

H. Stimulates changes in educational materials by producers: Educators should consistently make their needs known to the manufacturers and producers of educational materials.

I. To encourage innovations: Beyond accepting what exists, educators should assist in influencing innovations and planned change.

J. To accommodate time schedules: Educators need materials in a variety of timed presentations in order to have more options.

K. Power Structure: Can limit as well as encourage freedom of choice in a formal or informal way.

L. Community differences: Involve all levels in the selection and production of both locally produced and commercial or other media for instruction and/or learning.

M. Socio-economic differences: Choices will be influenced by the individual needs of all (minority or ethnic) groups in specific localities.

IV. How To Obtain Options:

How can those in education be afforded the opportunity to exercise the optimum number of options? These options should be available to the student as well as to the teacher.

A. First and foremost, the student has a genuine choice of options only if the educational program can be adapted to his own capabilities. It is of the utmost importance to provide the student with some options as to the way he learns and the things he learns. For students vary in their background, abilities, interests and character and in the mode of learning which is most suitable, effective and interesting for them.

B. Informed pre-service, in-service and continuing education is necessary if teachers and others in education are to be aware of the options open to them--especially in the realm of new approaches to subject matter and to techniques of study and teaching.

C. The establishment and re-evaluation of operational objectives can give students and teachers a clearer idea of what they are doing--and why.

D. Those in education need to be given time and opportunity for the research and development of their own materials. Without this neither students nor teachers have the option to use materials other than those produced outside their own classroom.

E. The provision of support personnel can widen the options open to teachers by releasing them from non-teaching functions. If support of this kind is inadequate the sheer weight of petty day-to-day administrative work in fact severely limits the freedom of choice for teachers.

F. At a wider level, the improvement of communications between the school or university and the community, and between it and industry, can widen the options available. Only if there is a good communications system here can those in education take advantage of the varied resources of the community and industry.

G. The encouragement and/or reward for innovative practices may widen the range of options. This may take the form of special professional recognition in the school and community. Monetary rewards might also be considered.

H. An adequate financial base must be provided and must be maintained with continuing support. Sufficient financial support is an important keystone for total satisfaction and success in teaching.

I. Production and utilization of materials is an essential option to the student and teacher when involved in the planning, learning, teaching and evaluation process.

J. Public and private service organizations can do much to widen the range of options to teachers. Where suitable organizations exist--which range from bodies like the National Center for School and

College Television (NCSCT) to publishing houses--they can make available an immensely wider range of teaching material than can ever be found in a single school, school district, or university. Some of the materials will be based upon a common curriculum; e.g., PSSC or BSCS. But this sort of material in fact widens the options open to a student rather than constricting the freedom to develop an individual syllabus. For new materials, even if produced on a national basis, can give the student a chance to learn a subject in a new way. Indeed curricular development, which should widen the opportunities for students to learn in ways meaningful to them, can develop faster if new materials are made available widely and rapidly. This is possible only by using all the resources of instructional technology.

K. Long range planning for innovation and change, as an option, is a necessity for success in modern education.

L. Those in education may wish to be concerned through the development of standards and procedures to identify and sustain these standards as goals.

V. Recommendations:

The opening comments of the committee reflected a concern for the proliferation of options for all those involved in deciding on the elements of a system to achieve a basic goal. Through discussion with industrial representatives and deliberations within committee meetings it is felt that a more effective program of planning, a total examination of the need, and evaluation of the cost-performance ratios, will result in a less confusing or frustrating feeling in dealing with options. A continuing evaluation process will provide check points for eliminating less desirable options. The following recommendations are therefore made.

A. It is recommended that a responsibility for the decision made in the final analysis must reflect a consideration of the options.

B. Anything that is created or produced for educational use should have options.

C. Options should be relevant and related to educational goals.

D. Recognizing that decisions made at one stage affect the number of available options at the next stage, most educational options should be exercised by the teacher/learner. Producers should therefore be urged to construct resources so that learners' options are optimized.

E. Materials should be designed as a core in modular form.

(Study Committee Report #2 continued)

F. A successful implementation of options calls for a recognition on the part of those concerned with the educational process of a need for greater flexibility in the use of such options.

The necessity of ensuring that an optimum number of options in education do become a reality to the educational community is one of the paramount issues of our time. The day is coming to a close when we, as educators, can bury our ineffectiveness and downright failures by rationalization and a loyalty to tradition no longer valid. Those who administer our schools and colleges and those who interact daily with our young men and women in the learning and/or teaching process are increasingly held accountable to the American public for the foundation knowledge, attitudes and skills which these young people will possess when they leave these educational institutions.

COMMITTEE MEMBERS:

Richard Pfund, Co-Chairman
Theodore Rothwell, Co-Chairman
Charles C. Daly, Recorder
Donald L. Horsman, Consultant
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Hilary Perraton

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STUDY COMMITTEE REPORT #3

TECHNOLOGY AND DEHUMANIZATION

I. Introduction

There is no data to which we can point which indicates that dehumanization has occurred in education, with or without technology. This discussion reflects fears and attitudes which exist, not necessarily what has actually come to pass. Technology and/or teachers have the potential for dehumanizing the educative process.

II. Position

When one considers the issues involved in humanization and dehumanization, perhaps the first problem encountered is one of semantics. The

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(Study Committee Report #3 continued)

popular use of the word dehumanization, when used in the context of educational technology, usually refers to replacing the human teacher with a teaching machine or other mechanical device designed to help the student learn. The term "depersonalization" could describe the absence of a human teacher in the learning process. While this point may appear to be somewhat trivial, it is, in fact, the central issue of a growing controversy in education. Few teachers would question the validity or desirability of a student involving himself in independent study while using a map, dictionary, textbook, or encyclopedia. However, some teachers resist violently the introduction of a teaching machine, computer, or other mechanical device on the grounds that it is dehumanizing the student.

There is a common fear among some educators that the dependence on message-mediating devices for instruction leads to a lack of personal contact between teacher and learner. Inherent in this observation is the realization that the personal-contact factor in instructional situations brings to both the teacher and the learner an important feedback element which many educators feel is the basis of good teaching.

Some educators feel that educational technology will result in a reduction of the personal element, the quality of the contact and the warm interaction between individuals; i.e., teachers and students. Some educators also feel that the ability to adapt the educational experience in a kind and understanding way to the immediate and long term needs of the individual student is lessened or eliminated.

We believe effective teacher use of educational media can make possible more personalization and humanization than is now present for both teacher and student. The full potential of technology in education has not yet been realized even in experimental situations; therefore, it appears that for both the present and the future, the best education for the child will involve a balance between mediated teaching and warm understanding, personal contact between the teacher and the student. The quality of the personal contact can be increased and the education process made more human because the teacher, by sharing the load with technology, can spend more time with the student in those tasks which will be most beneficial to the student's psychological growth and value development.

Seen in the context of this discussion, dehumanization is the absence of a person serving as a teacher for a learner. At a more complex level, dehumanization is a hallmark of the current cultural milieu. Man-machine relationships continually change as a matter of technological necessity, in many cases resulting in an absence of contact between human beings in even the most common every-day transactions of life.

(Study Committee Report #3 continued)

Educators, as both teachers and citizens in an advanced technological society, are especially sensitive to the importance of preventing what is seen as a demoralizing dehumanization of teacher-learner interaction in schools. They see what is termed technology primarily as a threat to an institution which is humanistic and human-being centered. Norberg[1] has said:

> The problem in education is not whether we are going to make use of modern technology, but under what set of conditions. More specifically, we need to develop a systems concept that is appropriate to education and one that respects the limits within which it must work in the education enterprise.

There is a decided difference between depersonalization and dehumanization; i.e., the removal of a human as against the stripping away of human characteristics.

The simple act of taking class attendance is a case in point. In a number of large school systems attendance records are stored in the computer along with many other student records. The attitude a teacher may have toward an absent student has little to do with the method of record keeping because the act of recording attendance or absence is impersonal. By no stretch of the imagination could this act of record-keeping be called dehumanizing. And yet, some teachers perceive this computerized student record-keeping as dehumanizing to the student.

It is recognized that strong interdependencies and interrelationships exist between personalization and humanization. Through the use of mediated interaction an individual can participate in experiences which assist him to become a socially adjusted human being even though there is no interaction in this experience with another individual. However, we must recognize that varied opportunities must be provided for personal interaction in order to develop the full human potential. The important element is not the quantity of situations in which live individuals are in close proximity, such as in the classroom--a situation which is usually interpreted as interpersonal interaction--but rather the quality of the true interpersonal interactions. How often during a day is each student granted the opportunity to relate in a constructive, meaningful way to an individual who shares the responsibility for that student's education? What percentage of student contact hours is spent in close proximity to that individual with whom there is no meaningful interaction?

Through the purposeful use of technology which may reduce the contact hours* between student and teacher, the personal interaction hours may increase between student and teacher; therefore, the "so-called dehumanization" may facilitate humanization. In that case, this "dehumanization" is in fact beneficial to the humanization of the individual.

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*Contact hour refers to that time when a student is under the supervision of a teacher. This includes lectures, seminars, tutors, study hall, and gymnasium. Non-contact hours include time spent in the library, cafeteria, etc.

(Study Committee Report #3 continued)

An example which may be cited is the audio-tutorial system of education at Oakland Community College, Bloomfield Hills, Michigan, where the students maximize the use of educational technology. Immediately available to the student who is studying in the carrel is a tutor who will provide individualized tutorial help. The instructor meets formally with the entire class only one period per week. The remaining time is spent in small assembly sessions consisting of four to six students who share a common problem, interest, or concern. In this example, educational technology has indeed reduced the number of contact hours the student has as a large group with the instructor, but has provided a greater opportunity for personal interaction and meaningful contact through small group sessions or individual conferences. Without the purposeful use of technology, this personal contact, with large numbers of students, over a prolonged period of time, would be almost impossible.

An interesting question is raised. "In educational technology, to whom does the term dehumanizing apply? To teachers, to students, or both?" If we look at the previously used example of attendance taking, we must recognize that the teacher takes attendance. The act of maintaining accurate records was once considered a rather important role of the teacher. Many times the neatness, accuracy, and completeness of a teacher's records was not only a matter of professional pride, but also provided a measure of the teacher's professional competency to be used as a deciding factor in promotions. This is a good example of dehumanization of the teacher. The computer dehumanized this act but only for the teachers who perceived this act as a measure of professional pride.

In regard to the use of technological innovations in education, the dehumanization issue applied first to teachers, who feared the inroads of educational technology into their teaching situations for a number of reasons. Technology first and foremost makes instruction publicly observable to everyone concerned with it, providing a basis for evaluation of instructional behavior. Technology, in addition, forces teachers to choose among options for their students--a decision-making task of the highest order, and one for which many teachers are inadequately prepared. Feedback provides the guide for instructional behavior. Absence of feedback focuses the issue of dehumanization on both the teacher and the learner, in that the quality of the interpersonal experience may often depend to a large extent on that feedback. The human factor of feedback is not necessarily absent when technology is applied to education. Norberg[2] has said:

> Since we are educators, first of all, and then specialists in our fields, our task is to work with fellow educators, and with industry, toward realization of the humane potential that resides in technology.

The central point, then, is the manner in which technology is used in education. There is a difference. The difference is significant enough to change the outcome from humanization to dehumanization. Again using the example of attendance-taking, the teacher who views this act as a simple record-keeping function may now have time to give a brief call to a student who has been absent for several days. During the course of a school year, the large amounts of professional time consumed by clerical tasks can be channelled into the professional spheres of teaching; i. e., interpersonal relationships with students. Population increases and the explosion of knowledge have placed greater demands on education. Considering these demands the only hope of having humanizing experiences for students might depend upon the purposeful use of educational technology. Thus technology will free the teacher to do the professional task of interacting with students.

If technology is used without regard to the needs of both teachers and students, the end result could be inadvertant dehumanization. On the other hand, the well-planned use of technology and teachers will allow maximum personalization and in turn maximum humanization.

Clearly, the way technology is used makes a difference as to whether the final result is humanizing or dehumanizing. Technology exists to assist in the application of solutions to problems in pursuit of a goal. By using technology to maximize the humanizing factors inherent in education, the educator can optimize the probability of reaching his goal.

Perhaps the concern of this committee can best be summarized by a statement made by Lee Cochran[3]:

> I am not half as afraid of what educational technology will do to the student as I am of what some teachers will do.

This statement recognizes the need for improvement in both educational technology and teachers so that both may realize maximum potential in their avowed purpose in the learning process.

III. Recommendations

These recommendations, formulated in the light of the preceding position paper, are addressed to those who are concerned with the issue of humanization of education through the use of educational technology, representatives of both education and industry, and members of the public at large.

A. There must be a commitment on the part of school administrators to extend contracts and provide assigned time to teachers for materials preparation and instructional development. This commitment must provide teachers with instructional support, such as adequate finances, resource people, clerical services, and media services. The administration can promote a climate of openness and acceptance of innovative practices in their institution. The recognition of media development as a professional skill by administration can be an important commitment, extending as far as financial remuneration for the development of media.

(Study Committee Report #3 continued)

B. Teachers must be aided in alleviating their fears of educational technology, so that they realize that as professionals they have control of educational materials. Teachers can be involved in establishing criteria for the selection of instructional materials. Teachers must continually gain new skills in order to effectively use newly developed technology. In addition, an emphasis should be placed on the expanded time made available, through the use of mediated teaching, for teachers to consult with individual students.

C. Since the task of the teacher is changed substantially as a result of the introduction of technological devices, teachers must be helped to understand, accept, and become more proficient in playing this more sophisticated role.

NOTES

1. Robert L. Rice, "The Relationship Between Education and Business," Audiovisual Instruction, XIII (February, 1968), 124-5.
2. Ibid.
3. Lee W. Cochran, personal interview held at the Fourteenth Lake Okoboji Educational Media Leadership Conference, August 19, 1968.

COMMITTEE MEMBERS:

Jude T. Cotter, Chairman
Steve Johnson, Recorder
David Gifford
John A. Tirrell
Eldon F. Walton

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STUDY COMMITTEE REPORT #4

ADAPTING INSTRUCTIONAL MATERIALS AND EQUIPMENT TO AN ERA OF CHANGE

I. Rationale

Within the Industry-Education dialogue it is desirable to identify certain relevances to the needs of education which may or may not exist in regard to instructional materials and equipment. Francis Keppel has said, "A public grown restless with paying for mounting educational costs is asking ever more insistently whether better management and more modern techniques cannot make schools and colleges more 'efficient', and help to curb expenses."[1] In line with the above comments the principal objectives of this committee deliberation have been to determine:

(Study Committee Report #4 continued)

A. Some aspects of the current status of industry-education cooperation

B. Some significant factors which have contributed to this current state of affairs

C. Some recommendations for possible change based on those determining factors

II. Definitions

A. Instructional materials are materials used by the teacher or pupil which may be viewed directly or which may be perceived, using audio or visual instructional equipment.

B. Instructional equipment is equipment which exists now, or may exist and is utilized in the production, display, or storage of instructional materials or in control of the above equipment.

C. Relevance alludes to the suitability/adaptability/accessibility of instructional material and/or equipment in fulfilling the objectives as prescribed for a given curriculum in a group or individual learning situation.

III. Current Status of Industry-Education Cooperation

A. There is evidence of increased initiative and involvement on the part of industry in education. Instructional materials and equipment currently being produced are having an ever-increasing effect on the structure of education, and it is conceivable that the following factors are influencing the nature of this increased involvement.

1. A belief that education is not meeting industry's needs for appropriately trained personnel

2. An observation that current curricula are not within the context of contemporary society

3. A general impatience with education's exceedingly gradual change in an era of rapidly advancing technology

4. A willingness and ability to experiment, stimulated by the availability of funds and the diversification of product

5. A desire for monetary return from goods and services created to meet the growing demands of the education market

(Study Committee Report #4 continued)

B. Educational systems and packages of correlated instructional materials are being developed, produced and distributed by industry at an ever-increasing rate. This current trend has various characteristics:

1. The provision of a wide range of resources giving the teacher a variety of options

2. The provision of greater depth in both materials and techniques

3. The provision of both materials and techniques which may help redefine the role of the teacher

4. The implementation and extension of opportunities for individualized and small group instruction.

C. There is an increasing involvement of educational specialists in the development of commercially produced instructional materials. Various benefits accrue from this creative collaboration:

1. The establishment of valid curricula relationships

2. The maintenance of high correlation of the materials to the needs, interests, and abilities of students

3. The provision of instructional materials and equipment that are appropriate to the learning situations for which they are intended.

4. The creation of materials that are high in motivational and involvement factors

D. Educators are attempting to cooperate more fully with industry in matters involving the evaluation and validation of commercially produced instructional materials; e.g., the tape and worksheet materials developed by 3M and teachers of the Norwalk, Connecticut Public Schools. This cooperative endeavor tends to establish the validity of materials prior to their production for regular classroom use.

IV. Factors Affecting Industry-Education Cooperation

The committee recognizes that the media specialist has inherited the traditional and logistical problems which the educational community and industry have not solved; i.e., the need for adequate staffs, the storage and shipment of films, and the decentralization of materials and equipment. At least three major interacting elements in the current industry-education dialogue have been identified as contributing significantly to the problem.

(Study Committee Report #4 continued)

A. Communication

The teacher has not come to the media specialist with well-defined problems or needs; also the media specialist has not effectively demonstrated his expertise to the teaching community. As individuals and as a group, teachers and media specialists have not worked closely enough to inform industry of the needs and trends of education.

B. Application

In traditional approaches, educators have spent too much time with immediate problems and not enough time on long-range planning. As a result, they have not solved the problems relating sophisticated equipment to its application. For example, building design itself often restricts the effective use of media. There is also much needless duplication of effort in certain media as a result of implementing the inherited concept that much of the production must be done at the local level.

Moreover, educators and industry representatives often have been organized along single medium approaches; e.g., a school system may have one committee to evaluate films, and an entirely different committee to evaluate filmstrips. Catalogs may show only films and filmstrips.

In-service and pre-service training programs have not kept pace with or made use of technological advances. As a result, teachers all too often are not trained in multi-media techniques.

C. Administration

Administrative support has been fragmentary. Money allocations to individual units often are inconsistent with local goals. At some levels, purchasing instructional materials and equipment continues to be done without adequate evaluative criteria procedures.

As a consequence of these factors, the teaching profession (curriculum and media specialists) has not exercised its proper role in becoming an effective agent of change.

V. Directions for Change

The following proposals are presented as feasible ways in which the status outlined in the preceding pages can be altered in order to establish a climate conducive to the effective employment of instructional technology.

(Study Committee Report #4 continued)

A. Industry and education should organize to support the proposed Educational Technology Act of 1968.

B. Liaison should be established between media specialists and teacher organizations to assess the needs of the teachers.

C. An industry and education council should be established whose members can commit time, staff, and money to the solution of the problems raised.

D. Continuing research and evaluation as to the effectiveness of current and evolving technology should be promoted and encouraged at the college graduate level.

E. A task force of members of DAVI and selected producers should be established to develop criteria for the evaluation of instructional materials and equipment.

F. A determination of the instructional materials and equipment required for the priority tasks should be made before monies are allocated.

G. Educators must provide industry with basic criteria for the production of instructional materials of all types and for the kind of instructional equipment required. This should be done in concert or cooperation with industry in order that the problems facing industry are not ignored.

   From the basic criteria for instructional materials, guidelines should be developed for selecting and evaluating materials, for developing programs (both immediate and long range), for sharing information, and for preventing the needless expenditure of money, energy, and time.

H. Administrators and architects should involve the media specialist both in the planning and design of new schools and in renovation of existing facilities. A compilation of resource personnel especially qualified in the planning and redesigning of school facilities should be published and made available for all levels of education. A list of consultants and a bibliography of publications related to facility planning should be developed.

I. Cooperative research by education and industry on the effectiveness of locally produced materials should be instituted. From this research, guidelines should be developed for production procedures.

J. The sharing of ideas between media specialists and teachers to identify educational needs for classroom materials and equipment is essential to the improvement of instruction.

(Study Committee Report #4 continued)

K. A sharing of ideas between educational leaders and commercial materials producers should be expanded. Commercial representatives should be designated so that educators might better know to whom the needs of education should be conveyed. A directory of such industrial representatives could be made available through DAVI.

L. As a corollary to this, representatives of industry might contribute significantly to the alleviation of some problems of the media specialist and the teacher if an arrangement were made for the industrial consultant to spend time in the classroom and media center observing the needs as they arise in an on-going program. His knowledge of the potential in industry could lead to suggestions of which the teacher and media specialist may not be aware.

NOTE

1. Francis Keppel, "The Role of Private Enterprise," School Library Journal XIV (October, 1967), p. 132.

Committee Members:

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Lee Campion
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STUDY COMMITTEE REPORT #5

CRITERIA

I. Rationale

The conditions under which modern media are used in the schools are very different from those under which they are used by other organizations.

In the schools, students, student assistants and other technically untrained individuals (including sometimes reluctant and pre-occupied teachers) are often responsible for media operation and maintenance. Further, the number of hours of such use and operation in the schools is generally higher and on a more regular basis than that prevailing in other non-school uses; e.g., commercial, religious, club, etc.

(Study Committee Report #5 continued)

It is obvious, therefore, that greater simplicity, durability, and ease of operation must be built into equipment intended for school service than is needed by most other users.

This committee has identified a few of the considerations which need to be taken into account in design, manufacture and service if optimum use is to be made of the newer media. In the hope that these considerations may be of value and interest to the manufacturers in assisting them to best service the needs of education, some of the principal problems and considerations identified by this committee are presented here. It is our hope that other educators and manufacturers may add other equally important items to the end that our common, cooperative efforts may result in improved education for tomorrow's citizens.

Before these specific considerations are noted, however, certain assumptions must be made.

II. Assumptions

A. There is a need to develop guidelines

B. Industry is willing to respond to the needs of education

C. Education is willing to respond to the needs of industry

D. The experiences of the educator can be used as guidelines in the future design and development of educational materials and equipment

E. The educational considerations are widely applicable

III. Considerations

A. Instructional Materials

The following considerations are relevant to establishing criteria of quality in the design and production of instructional materials:

1. Content

   a. It is recommended that producers develop instructional materials that are educationally valid, based upon careful documentation and the result of consultations with knowledgeable educators in the intended use area; these should be released only after adequate pre-publication field testing.

   b. It is recommended that more emphasis be placed upon the production of student-oriented rather than teacher-oriented materials in view of the trend toward individualized instruction. This includes consideration of individual differences such as age and achievement level.

(Study Committee Report #5 continued)

c. It is recommended that materials be developed with attention to specific objectives in such areas as:

   1) motivation
   2) communication
   3) clarification
   4) understanding

d. It is recommended that materials be modular in design wherever feasible to allow for the selection of appropriate segments with the option of purchasing individual modules.

e. It is recommended that attempts be made to produce needed multi-media instructional materials.

f. It is recommended that instructional materials be accompanied by comprehensive utilization guides (for teacher use and for students use) which shall include the stated objectives, bibliographic information, cross references, suggestions for further projects and activities, and data from pre-publication testing.

2. Technical Characteristics

   a. It is recommended that producers select film stock, mounts, inks, etc. of the highest quality to withstand normal classroom use and handling.

   b. It is recommended that the audio portions of materials be of a quality capable of utilizing the full potential of high quality sound equipment.

   c. It is recommended that photography, graphics, lettering, etc. meet professional standards to facilitate effective learning.

   d. It is recommended that packaging be durable, reusable, easy to store, and adequately labeled.

B. Instructional Equipment

The following considerations have been identified as essential in the design of instructional equipment.

1. It is recommended that a concerted effort be made by industry to provide equipment that would insure interchangeability of format between manufacturers.

(Study Committee Report #5 continued)

2. It is recommended that industry develop a systematic program of field testing prototype instructional equipment under actual everyday operating conditions. Furthermore, to implement such a testing program, it is recommended that a clearing house be established between industry and education.

3. It is recommended that industry guarantee parts availability for equipment no longer in production for a specified number of years, such time to be determined by the type of equipment, total units sold, expected life and other related factors.

4. It is recommended that ease of maintenance, both in the field and in the shop, be an important factor in the design and construction of equipment. It is further recommended that modular construction--both mechanical and electronic--be utilized to the maximum degree possible; that standard, readily available, common stock-item parts be used wherever possible, and that a parts substitution guide for such items as lenses, lamps, switches, etc., be furnished with each piece of equipment.

5. It is recommended that comprehensible, visible operating instructions including threading diagrams, lamp replacement charts, be conspicuously located on each piece of equipment; these instructions should not be located on equipment covers, cases, and the like. It is further recommended that a maintenance manual and replacement parts list be included as standard items with each piece of equipment as well as a comprehensive operation manual.

6. It is recommended that equipment primarily for school use be designed and constructed for durability, ruggedness, and hard handling, because of the very wide range of users of such equipment--from beginners to occasional users to professionals--and the need for constantly moving equipment from one location to another.

7. It is recommended that human factors engineering be applied in media equipment control design, location and functions, which will provide comfort, safety and satisfaction to the user. Human factors engineering must be given equal consideration with other manufacturing factors such as physical appearance, production costs, marketing and distribution, and the like.

IV. Glossary of Terms

A. Educational Media (Newer Media):

Materials and technological devices used in the teaching-learning process.[1]

(Study Committee Report #5 continued)

B. Feedback (from learners):

Return communication from learner to teacher which gives to the teacher an indication that his message has been received by the learner.[2]

C. Field Testing:

The process of testing new instructional equipment or materials under the conditions in which they are used for the purpose of evaluation and with an eye to improvement. This testing should be completed prior to release of such equipment and materials for general use.

D. Format:

The size, shape, rate of travel, and location of elements within or on units of instructional materials; e. g. , frame dimensions, sprocket hole locations, audio tape track locations.

E. Human Factors Engineering (Human Engineering):

The designing of equipment in such a manner that human sensory capacities, psychomotor abilities, body dimensions, comfort and satisfactions are taken into consideration.[3]

F. Interface:

A bringing together in a meaningful way. This term implies interaction between (or among) the elements brought together.[4]

G. Modular:

Made with a number of self-contained sub-assemblies which can be readily removed and replaced.

H. Pretest:

1. A criterion test administered to a (group of) student(s) for the purpose of determining to what extent he (they) may exhibit the terminal behaviors of the instructional unit.
2. A test administered to a (group of) student(s) for the purpose of determining the extent to which they exhibit the entry behaviors required for an instructional unit.

I. Utilization:

Use of educational media in an instructional setting. The existence of a body of principles governing effective use is implied.

(Study Committee Report #5 continued)

J. Validity:

Determination that materials actually produce the effect upon knowledge, skills, attitudes and beliefs for which they were designed.

NOTES

1. The EPIE Forum, I (February, 1968), a publication of The Educational Products Information Exchange Institute, New York.

2. Ibid.

3. Ibid.

4. Richard Nibeck and John Wilshusen, personal conversation held at the Okoboji Conference, Milford, Iowa, August 20, 1968.

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STUDY COMMITTEE REPORT #6

CONTINUING EDUCATION-INDUSTRY FORUM

I. Introduction

We believe it is apparent in our increasingly technological society that both education and industry representatives must contribute extensively to the educational process. It is the point of view of this conference that previous efforts have been largely unilateral and that dialogue leading to closer collaboration is needed. A planned approach to collaborative efforts, with roles and relationships carefully identified, is mandatory. The major effort of this committee has been to develop a procedure for fruitful continuation of the kind of dialogue made possible by this conference.

II. The Current Scene

A. Goal Identification

The goal of this committee was to set forth an approach to optimize the cooperation between education and industry to achieve the larger goal of effective learning.

B. The Present Situation

A mechanism through which education and industry can communicate their needs efficiently, reliably and comprehensively does not exist. One need only recall the abortive effort in the area of programed instruction as an example.

C. Analysis of the Problem

In a general analysis of the problem of establishing a continuing dialogue, the key areas are (1) those people involved in the decision-making process concerned with concepts, products, and the use or marketing of these products, and (2) those topics of mutual concern. These two areas could be termed the who and what of the problem.

1. The people involved in the decision-making process

   a. All decisions ultimately affect the learner. We recognize his critical position as recipient of media. His relationship to the teacher is a close one, and the teacher is engaged in implementing most of the following tasks:

      1) Identifying the needs of the learner
      2) Marshalling of clinical and diagnostic testing, guidance, etc.
      3) Application of the theories of learning
      4) Determining what information can be derived from the learner's experience
      5) Reinforcement of the learner's critical needs

   b. As the closest link to the learner, the teacher has unique responsibilities as a part of any continuing forum. His role in that dialogue may not always be in direct communications with industry, but it would include these aspects:

      1) Identifying pupil needs, potentials, and achievement
      2) Utilizing local resources

(Study Committee Report #6 continued)

3) Meeting media salesmen at school, workshops, conferences; often unloading problems and gripes on his shoulders
4) Entering or contributing to promotional projects sponsored by industry
5) Being a part of a trial or experimental market in professional education through the university or college personnel who act in an advisory or authorship capacity
6) Receiving skill training and guidance in selection and utilization of media
7) Provide on-going feedback

c. The administrator as instigator or decision-maker

Traditionally administration or top-level management has held the overall responsibility for carrying out the policies and programs of the organization. The chief school official or his designated representative holds this responsibility in education. At this level he must carry on the decision-making and interaction with similar levels in industry, the community and in general the world outside the school. Responsibilities and accountabilities in this area might well include:

1) Assist in the selection of projects
2) Identification of services required
3) Recognition of community involvement
4) Determination of course of action
5) Involvement of staff members appropriate time and service
6) The seeking out and utilization of effective industrial executive assistance
7) Maintenance of free flowing exchange of purpose (dialogue, etc.)
8) Stimulation of educational staff to participate and utilize channels established

d. Within the administrative structure of the educational institution the media specialist should be the catalyst in the several processes involved. As the liaison person between the teacher and other administrators, he best serves the media field in a number of ways.

1) Awareness of the needs of the learner
2) Knowledge of the field of materials and equipment
3) Initiation and/or participation in experimentation and pilot projects
4) Innovation and the encouragement of teacher innovation
5) Budgetary responsibilities
6) Shared responsibilities in the selection of equipment and material

7) Knowledge of utilization of equipment and material
8) Knowledge and experience in maintenance of equipment and material
9) Acquaintances and contacts with industry
10) Influence in establishing criteria and standards for equipment and materials
11) Message design

e. In most fields of endeavor one finds knowledgeable persons who maintain close liaison with associated fields. Industry has salesmen or representatives who meet the field head-on. These men can provide the liaison between education and industry.

Conceived in the best interests of both functions, the company representative or salesman should provide a number of beneficial functions.

1) To report new ideas and techniques
2) To demonstrate
3) To sell
4) To provide service
5) To provide informal feedback and evaluative service
6) To recommend when appropriate
7) To serve at times as a catalyst stimulating creative and innovative effort on the part of either or both education and industry

f. Inasmuch as the salesman may in many instances be the only contact between the user and the production facility, he becomes the image of his company. His credibility with both education and industry is paramount. Industrial management, administration and executive responsibilities in industry are well defined and structured for specific functions of the purposes and intent of the corporation. Responsibilities may be specifically delegated in broad terms and categories, but may also allow considerable flexibility and adaptation to needs. The desired image of the corporate structure often dictates to a degree the participation permitted in services to educational institutions. Identification of appropriate executive assistance may involve a number of officials including:

1) Public relation executive
2) Educational consultant
3) Production manager
4) Research and design engineer
5) Company training director
6) Continuing education director
7) Author-writing executive

(Study Committee Report #6 continued)

g. Top-level management in industry are responsible for decision-making, interaction with education and the delegation of functional responsibilities. Areas of probable responsibility include:

1) Determination of general area of operation
2) Decision on services available
3) Acknowledgment as to community involvement
4) Determination of corporate policy toward education
5) Assignment of operational areas and personnel
6) Plans for research and development
7) Promotion of company-client relationships
8) Encouragement of cooperative enterprise at all levels between industry and education
9) Establishment of field testing, product acceptance and feedback channels for product evaluation

2. Topics of Mutual Concern

There are at least three specific areas which must be discussed if more effective learning is to result. These may be defined as structures, specific knowledge, and utilization.

a. Structure

The lack of understanding of each other's structures, goals and philosophy today hinders cooperation and lessens the effective use of the resources of education and industry for the attainment of improved learning. In any dialogue between industry and education each must know where and by whom decisions are made at many levels depending on the nature of the decision. An understanding in the following areas is vital:

1) Specifics on structure
2) How and by whom decisions are made to purchase
3) Details of motives and goals
4) Financial problems

b. Specific knowledge

Both education and industry must know the specifications of existing products and also those products planned for the future. It is important also that information be available regarding how well products are meeting specifications.

Education must transmit specifications for its requirements. Industry must likewise specify what materials, equipment, and services are available. Dialogue must also take place in the planning and field testing stages so that the products of both education and industry meet requirements.

(Study Committee Report #6 continued)

c. Utilization

Both education and industry have much to gain from an exchange of talent. The following are areas where talent exchange would be of value:

1) Management techniques
2) Product usage
3) Educational techniques
4) Financing
5) Training requirement design
6) Facility design and utilization
7) Production techniques
8) Research and evaluation procedures

III. Recommended Action

There are many obstacles facing the establishment of any continuing education-industry dialogue. The solution is not easily achieved and can only be found in a series of small steps leading to a well established procedure for insuring a continuing dialogue.

We recommend as the first step the convening of a national forum composed of leading educators and industrialists whose task would be to devise a model for experimenting in ways and means of devising a continuing dialogue. In establishing this model we recommend the following approach:

A. Pilot Studies with well defined objectives should be initiated at local or regional levels to determine the most appropriate mechanism to provide a dialogue. Where existing forms are now operational they should also be included to provide the basis of a pilot study.

B. Evaluation of these models should be implemented to determine their effectiveness in accomplishing the goals.

C. Redesign of the model should be undertaken to achieve the model's goals and/or expansion to operational phase.

IV. Implementation of the Recommendations

A. A national forum composed of leading educators and industrialists should be convened in early 1969 to develop a model for establishment of a continuing education-industry dialogue.

B. The forum can be convened by a recognized organization such as DAVI or under private sponsorship if necessary.

(Study Committee Report #6 continued)

C. We further recommend that the delegates of the Fourteenth Okoboji Conference establish some form of educational-industry dialogue in their communities.

Committee Members:

Calvin Otto, Chairman
Arthur Cowdery, Recorder
Theodore Henry
Donald Horsman
Marie McMahan
George Phillips
Arthur Proulx
Peggy Sullivan

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APPENDIX A

OKOBOJI EVALUATION

(1968)

Evaluation Committee:

Lee Campion, Chairman
Howard Hitchens
Gordon Blank
Arthur Lalime

OKOBOJI EVALUATION - 68

Introduction:

Every three or four years an Ad-Hoc Evaluation Committee is appointed to evaluate the Okoboji Conferences. The previous evaluation was conducted in 1964.

It was the purpose of the 1968 Evaluation Committee to employ the assistance of the 1968 participants of the Okoboji Conference as they represent numerous delegates who have attended two or more conferences in addition to the first timers. The Committee attempted to assess two main areas:

(1) Purposes and values
(2) Structure and operation

Other related miscellaneous items were polled to acquire further information.

The Committee in preparing an evaluation form made no pretense of designing an infallible measurement device. Interviews and small group discussions were equally important and, for some questions, more important than the evaluation form itself.

The members of the Evaluation Committee had all attended several Okoboji Conferences.

Overview:

This year's participants numbered seventy-three (73). Of these, thirty-four (34) responded to the questionnaire. The thirty-four (34) responding were distributed as follows:

One year . . .	24
Two years. . .	2
Three years . .	3
Four years . .	2
Five years . .	1
Six years . . .	2

It is evident that the experienced Okoboji delegates took their responsibility for reporting less serious than did the new delegates. The obvious lack of reports from the experienced delegates must certainly be taken into consideration when evaluating the findings of the survey.

Although the Evaluation Committee was limited in time the evaluation form and the other inquiry methods used provided sufficient evidence to make the following overall conclusions:

1. The Okoboji Conference is extremely popular with an overwhelming majority of the delegates. This is evidenced by the unanimous decision to continue Okoboji next year.

2. The basic structure and procedures are operating effectively and little change is recommended.

3. The pre-planning is exceptional in its efficiency and method of providing every convenience and facility possible.

4. The criticism which does exist concerning the Conference is unorganized and fragmented.

Purposes:

The Committee attempted to find out what the delegates felt were the main purposes of the conference. The evaluation form indicated that the major purposes are (ranked in order):

1. The development of leadership

2. The exchange and testing of new ideas, concepts, information, trends and directions.

3. The discussion of a major theme and related issues

4. The development of future leaders

5. To meet informally with leaders in the field and share ideas with colleagues.

The first three purposes were indicated by most of the delegates. No doubt the delegates attending the conference were in relative agreement as to why they were attending the conference.

What the purposes are and what they should be may not necessarily be the same. Therefore the Committee attempted to determine what the purposes should be. The delegates ranked the main purpose accordingly:

1. The exchanging and testing of new ideas (No. 2 above)

2. Discussion of a major theme and related issues (No. 3 above)

3. The discussion of new ideas, concepts, and information (No. 2 above)

4. The development of leadership (No. 1 above)

5. To meet leaders and colleagues (No. 5 above)

The high priority given to the activities centered around the main theme indicates the growing importance of facing a major issue and approaching it in depth. Although numerous other purposes were stated the general consensus was that the purposes that exist are the purposes that should be.

Values:

Each delegate takes away from Okoboji his own feeling as to what contributions the conference makes to him. The Committee was interested in knowing what the major personal values are and how they relate to the purposes of Okoboji.

The values mentioned most are ranked as follows:

1. The receiving of and exploration of new ideas, concepts, and information.
2. The informal and formal meeting with leaders in the field.
3. The exchanging and testing of new ideas.
4. The values obtained from the thorough examination of a main theme and related issues.

The close relationship of the values received and the purposes of the conference again point to the consistency of the why of the conference and the values received from the conference.

Structure and Organization:

As stated in the overview the delegates gave overwhelming approval to the structure of the Conference and the organizational program. This does not imply, however, that there were not important suggestions made to streamline the operation of the conference. Several of these suggestions were related to the unstructured aspects of the Conference which allow the co-chairmen and discussion group leaders reasonable flexibility in conducting the required business. Within the democratic framework individual delegates and, at times, the various committees caused long drawnout discussions centered around what a large number of the delegates term minutia. This is a major criticism and serious attention should be given to it by the Planning Committee and the chairman.

The Conference as now structured requires the delegates to pay his own transportation and lodging. Ten delegates indicated difficulty in getting the time and/or money to attend. Others indicated they just paid their own way. The fact that several people did not attend because of this problem indicates it is worth consideration. Possible assists might be found or explored.

Several delegates felt that the general sessions were too long; at least those presentations which did not allow for appropriate reaction from the delegates. The keynote speakers did not remain for the entire conference so the opportunity for all the delegates to benefit from their knowledge and experience on an informal basis was lost. The need for more experts to be at the conference was expressed frequently. This suggestion, in view of the purpose and value related to meeting leaders in the field and exchanging ideas, calls for more effort to assure expertise and top leadership.

The "show and tell" session was approved by most. However suggestions for improvement were:

1. Put a strict time limit on the presentations
2. Limit the number
3. Relate them to the theme
4. Screen them before they are accepted

Show and tell does help meet the purpose of exchanging and testing ideas.

The Conference summary was heartily received by the 1968 delegates. The evaluation form and this year's presentation point out that when the right person or persons are selected to do the summary the result is highly advantageous.

Attendance:

It was noted in the data that some participants have attended Okoboji as many as six times--in some cases, four or six times in succession. Clearly, the delegates polled felt that the primary determinant for attendance should be "when the selected theme is relevant to your area of specialization." While selection of delegates is not at present precisely controlled, the expression of the group on this issue was quite unequivocal--attendance should not be successive and for more than, perhaps, two years without a break.

Recommendations:

1. Invitations from the national headquarters of DAVI should be addressed to the employer or supervisor of each invitee, rather than the individual alone, where this is feasible.

2. A follow-up survey should be conducted under the auspices of DAVI, using the entire population of previous Okoboji attendees. The survey should attempt to assess the two main issues which became apparent as a result of the evaluation: (a) a review of the procedures by which delegates are selected, and (b) the role of DAVI regarding the Okoboji Conference and the concept of a media leadership conference.

3. Since the Okoboji report is used throughout the field, it should be kept as precise and substantive as possible, with unnecessary detail held to a minimum.

4. The President-Elect of DAVI should be made an ex-officio member of the Okoboji Planning Committee.

Conclusion:

The "magic" of Okoboji cannot be denied. There is a spirit of camaraderie, cooperation, and dedication that cannot be discovered in an evaluation form. It is discovered by observing the enthusiastic behavior of the delegates and staff as they respond to the Okoboji environment. Even the heat of the day could not cool the warm acceptance of what occurs at Okoboji.

The Evaluation Committee's final recommendation is to continue the Okoboji Media Leadership Conference in 1969.

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OKOBOJI EVALUATION FORM

Every three or four years an Ad-Hoc Committee is appointed to evaluate the Okoboji Conference's contribution to the field and toward the development of leadership. The evaluation was last conducted in 1964.

It is the purpose of the 1968 Evaluation Committee to employ the assistance of the 1968 delegates as they represent numerous delegates who have attended two or more conferences.

It is hoped the Evaluation Committee will be able to recommend guidelines for future Okoboji conferences should the wishes of the delegates be that they continue. The Committee will give an oral report at the conference and prepare a written statement for the conference report. Recommendations will also be forwarded to DAVI.

Your time and cooperation in completing the report is appreciated.

General Information:

Number of times you attended Okoboji _______

Type of occupation____

Purposes:

What are the major purposes of Okoboji? (Rank numerically in order of preference with No. 1 being top priority)

( ) Socialization
( ) Meeting colleagues
( ) Exchange and testing of ideas
( ) New ideas, concepts, information
( ) Develop leadership
( ) Develop leaders of tomorrow
( ) Discussion of theme and related issues
( ) Career advancement

( ) Others (briefly describe each purpose)

What should be the three major purposes of Okoboji?

Values:

What are the three main values you receive from attending Okoboji?

Can you briefly site several examples as to how attending an Okoboji Conference contributed to you?

Structure:

Is the Okoboji too structured?_____; appropriately structured?_____; too loosely structured?_____

Comments:

Is the present procedure, whereby the planning committee acting upon the recommendations of the previous years delegates, a satisfactory procedure for selecting the theme? Yes_____No_____. If no, please make specific recommendations.

Should the planning committee be appointed by the President of DAVI or by some other means?

Is the present procedure for program planning and development by the planning committee a satisfactory method? If not, please make recommendations.

Participants:

Is the present procedure for selecting the delegates a satisfactory procedure? Yes_____No_____. If not, please make specific recommendations.

Do you feel you contributed to the conference you attended? A great deal_____; average_____; a little_____; none_____.

To what extent do you feel you have had the opportunity for personal involvement and participation? A great deal_____; average_____; a little_____; none_____.

Report:

For what purposes have you used the Okoboji Report?

Do you have any recommendations for improving the report?

General:

Is the conference too long; too short, just right?

Are the general sessions too long, too short, just right?

Do you have any recommendations for speeding up or streamlining the conference procedures?

Should "Show and Tell" be continued? Yes_____ No_____

Remarks:

Is the conference summary of value? Yes_____ No_____

Remarks:

Miscellaneous:

Has attending Okoboji been of any prestige value to you? Yes_____ No_____

Have you had any trouble obtaining time and/or money to attend Okoboji? Yes_____ No_____

How often do you feel it is desirable to attend Okoboji? Every year_____; Every other year_____; when the theme is appropriate to your needs_____; others_____

Is the advance management preparation for the conference satisfactory? Excellent_____; Well done_____; Average_____; Fair_____

__Future__:

What role should DAVI play in supporting, sponsoring, or stimulating the Okoboji Media Leadership Conference?

Should Okoboji be continued next year? Yes_____ No_____

* * * * * *

These were the concerns submitted by delegates to the 1968 Okoboji Conference. They were distributed at the conference and used by the Planning Committee and by other delegates to help formulate the discussions.

EDUCATION-INDUSTRY DIALOGUE

1. **ROBERT BARNARD**

Probably at no other time has the teaching community had a greater opportunity to influence the manufacturers of teaching hardware. Teachers have been presented with quality film, television and computer hardware which may lead to changes in basic concepts of instruction.

The critical question is raised: Will the "software" of education be equal to the "hardware" of the newer teaching aids? Where audiovisual materials are applicable, efficient methods should be developed to transmit information concerning the suitability of an appropriate aid from the teacher to design and the marketing specialists to increase efficiency and reduce costs of equipment.

The concept of the audiovisual salesman is obsolete. Consultants from industry, qualified and interested in listening to and analyzing the teachers and audiovisual specialists needs, flexible and adaptable to the varying techniques of the instructors are required. Industrial representatives potentially are also a resource in solving technical problems or designing installations using the newer hardware but this must be done in the context of the subject matter use. Key questions in the dialogue might be: Is the instructional design adequate to make effective use of the proposed hardware? Does a particular device do something demonstrably better in cost benefits, memorability, transferability, etc. than conventional instruction in the particular subject matter.

Industry field training programs for specialists and teachers might well be based on a case history approach. The industrial representative would be in the desirable position of demonstrating applications of his equipment which can be best evaluated by the subject matter specialists. The merits of a particular hardware item would be the basis for discussion, not the concept in general.

Audiovisual concepts and equipment designed for engineering convenience, compatability, or interchangability may not be the best criteria for sales or use. Planned obsolescence and flexibility in hardware design and course content is now necessary. The field requires a consistent mechanism for the sharing of ideas between the equipment manufacturer and the educator.

2. **ARTHUR R. COWDERY, JR.**

A. What are the ethical issues involved in an Education-Industry relationship?

B. Will educators think of, and speak to, industrialists as equal, in a language meaningful to both groups?

C. Will educators accept the profit motive as being natural in our society?

D. What is the role of State and Federal government in an Education-Industry relationship?

3. **EVERLY W. COX**

A. This writer has a concern for the means whereby education can maintain pace with technological developments.

B. Is industry considering the educational benefits of their technology in the interest of student learning, or more the financial returns on their investments?

C. Is the technology being developed by industry dehumanizing education?

D. The educators role is concerned with the learning of students, how then can educators have a greater opportunity to evaluate industrially developed materials for education?

4. **EDWARD H. DAWSON**

   A. Not being convinced that we (media people) are doing all we should be doing in the development of standards for hardware and software, the concern develops that we are being directed by commercial interests. Audio tape recorders are compatible from manufacturer to manufacturer, yet video tape recorders are not compatible. Sometimes, even like models from one manufacturer are not compatible. Reportedly, the way one company chose the tape speed was purely on the basis that no one else had used it - it was all that was left.

   B. The package deal - packaged programs - is gaining in popularity. The January 1967 issue of the Phi Delta Kappan (Pages 230-236) discusses the acquisitions of major companies. Newsweek and 3M, CBS and Creative Playthings, Raytheon and Dage-Bell, D. C. Heath, MacAlaster Sci. Corp and Edey, RCA and Random House, are but a few of the examples of this combining for packaged programs. Some concerned companies are securing educators with expertise in psychology, and media, and content. Other companies are just securing "promising" educators. RCA fell into the trap several years ago in producing a physics series in transparency form - the graphics were inconsistent. In many aspects we today have a standardized national curriculum administered by industry. The concern - have the media people been taking a back seat and letting the administrator accept the industrialized national curriculum?

5. **ROBERT M. DIAMOND**

My main concern, and I think it is at this time an unsolvable one, is for the development and evaluation of software that can keep up with the generation of new hardware. So many times in the past manufacturers have come up with new capabilities that are unused simply because the materials required are nonexistent. I can't help but wonder if it might be possible for the software development to begin as soon as the concept of the new hardware configuration is evolved. This, to me, is a priority area of concern and cooperation between industry and education.

6. **DR. NICHOLAS J. FIEL**

   A. Will software development keep pace with hardware development?

   B. Will this software development be that which produces behavioral changes or will it merely be a lecture put to slides and tape or some such similar situation?

7. **KENT L. GUSTAFSON**

   A. Goals vs. Objectives

      1. Goals are the general purposes for which society has created schools. Objectives are the specific behavioral acts that a teacher or learning psychologist measures in order to determine proficiency.

      2. Can we, and should we, reduce all goals to behavioral objectives? How do we measure a learner's efficacy toward democracy?

      3. We should not have goals that are not measured, however, there is a danger that we will eliminate from the curriculum those goals that do not lend themselves to easy statement in behavioral terms. Will we continue to work on this problem with part of our resources or will they all be applied to developing the easy objectives?

      4. Historically, the public (at least in principle) has determined the goals of education and educators have determined the methodology. Much of the protest by students today centers on desire for changing some of the goals of education. If a few large educational combines do become major forces in education will the public be able to register its desire for changes in goals and cause changes of direction. The military complex seems to indicate that after a critical mass is achieved the process is self-propelling with little regard for external forces. How do we protect against this in education?

      5. Survival of the nation may depend on the number of options available to the society. Is there a danger of greatly limiting the number of options when and if a small number of combines become the sole suppliers of educational systems?

(continued)

B. Research and Development

1. Systematic development of complex education programs is expensive. How must schools, states and the nation rearrange their financial structures to adjust to this?

2. Will the great expense of development take money away from other activities now sponsored by the government? For example, USOE recently announced that it would emphasize development rather than research. While everyone would agree that we are not using what research we already have, I feel this does not warrant ending new research.

3. Due to great development costs will it be feasible to revise and update at frequent intervals? We see text publishers continue to publish a book because revision costs are high. In a limited competitive situation is this even more likely?

4. If federal funds are used to develop instructional systems will these systems become public domain? The recent short term copyright of such materials granted by the government will not protect the developer for more than three years. Do we need to extend this copyright time? Should everything immediately become public domain? What are the implications?

5. Can a variety of materials be developed to combat such widely separate children as the upper middle class advantaged child and the extremely disadvantaged low class child? If both cannot be done simultaneously which will receive priority?

C. Where do the private schools fit into this scheme?

D. Can the education market provide sufficient profit for industry? If not, the great potential will never be reached. Problems include: many independent small districts; local control of education; and inadequate financing.

E. Teachers

1. What should we now be doing in teacher preparation institutions to prepare future teachers?

2. What type of staff (teachers and administrators) development should we be doing with in-service faculty?

3. How will these faculty roles be changed?

F. DAVI

1. What should DAVI be doing?

2. How will DAVI be affected?

3. Will a new breed of technologists or educational engineers develop that DAVI should be prepared to include as members?

8. WARREN HAFFNER

I am concerned for the educator who is perfectly willing to let industry do all of the research and development in education and learning theory. I am concerned about the educator who will permit industry to dictate to the schools how a subject should be presented. I am also concerned that because public instruction does not have a profit-making motive, it is often slipshod in the conduct of its business, and often sends good money after bad due to "poor planning." I am concerned deeply that many administrators do not have the vision and forethought which is so evident in industrial leadership today.

9. HAROLD E. HILL

A. Development of equipment for educational uses

1. Generally in the past educators have simply tried to take existing equipment, designed for other purposes, and adapt it to education's needs.

(continued)

    2. It is time for educators to give serious consideration to determining just what kinds of equipment need to be developed to fit their particular needs.

    3. Industry needs to consult with educators as new equipment is being developed and must take education's needs into account.

B. In the development of materials (software), industry has led the way; admittedly this has generally been due to inertia on the part of educators. The same problems listed in #1 above apply here.

C. Tied in with both of the above is the over-riding problem that, unfortunately, most educators do not seem to have a large enough vision nor enough understanding of the problems to "think big" about these matters.

    1. They tend to get in a rut, often confined to one small area of a particular medium, and thus are not able to consider the very great implications for education of the "education-industry gap."

    2. This myopia also precludes the possibility of the long range planning alluded to above.

10. HOWARD B. HITCHENS, JR.

A. My emotions are mixed concerning the Education-Industry Dialogue. I realize that much expertise about how to get things done rests in American industry on the free enterprise system. As a suspicious educator I must ask:

    1. Is the only industry motivation that of profit, because of the large amounts of federal money now available in American education? Just how benevolent is American capitalism?

    2. If it is true that Systems Engineering has great efficacy for education then are not we ill-advised to fight industry or dread their encroachment on education? Should we not welcome them and their help?

B. There are several efforts which have been and are currently being made to improve the Education-Industry Dialogue. Among these are the Annual American Management Association Educational Technology Conferences which are in their fourth year, the Aristotle Project, and the efforts of the Aerospace Education Foundation (a sub-unit of the Air Force Association). What, really, at the professional level is the education sector doing or capable of doing to increase the Dialogue?

11. LEONE H. LAKE

A. New demands on the educational system. (The educational doctrine of today is associated with new technology; thus expanding research and developments are required.)

    1. Role of business in education.

        a. Can education, industry and government be effective and cooperative partners?

        b. Will business provide resources for research and development?

        c. How should schools be administered?

            (1) Should profit-making companies become managers of education, (public school systems, libraries, and other similar institutions?)

        d. What kind of learning space and equipment is needed?

B. New patterns of change in education with changing needs in society.

    1. Under what set of conditions do we use modern technology?

        a. How will curriculum be effected by technological and social change?

        b. What is the teachers' function in this new kind of learning?

(continued)

- (1) Will technology dehumanize education?
- (2) How can creativity be stimulated and developed?
- (3) What are the requirements for improved teacher training?

12. JOHN J. LAURIA

- A. Industry is developing hardware faster than education is utilizing it. How do we bridge the gap?
- B. What is industry doing to produce educationally sound software to be implemented with the hardware available?
- C. Is industry consulting with educators before designing new hardware?
- D. How much market research goes into an item before it goes on the market?
- E. Why isn't industry standardizing formats in hardware such as 8mm standard, super, sound, etc.?
- F. What is the commitment of industry to education in training personnel?

13. JERRY LINKER

- A. Men
  1. How can technology be used to increase the development of human capabilities and promise?
  2. In adapting instructional technology to the classroom, what will be the role of educators and/or industry in light of basic differences in organizational purpose?
  3. What are the manpower requirements for adapting existing technology to the classroom, for continuing technological development?
  4. How do we develop and train the educational manpower to meet these needs?
- B. Technology
  1. How do we develop programs that are consistent with the technological potential of the hardware and the learning requirements of the student?
  2. How can we develop heuristic models to determine the instructional effectiveness and cost effectiveness of technology?
  3. What are the best guidelines to follow in merging advanced technology into existing systems?

14. CALVIN P. OTTO

- A. Government and Education
  1. Federal government support of curriculum development.
     - a. Potential problems of national standardization of curricula; is it good or bad?
     - b. Pressure of the federal government's control over the schools due to its economic support (control).
     - c. Reverse problem of government withdrawal of support on curriculum projects resulting in little or no development support from any source; would this cause a loss of momentum in updating curricula?

(continued)

2. Federal government support for the purchase of equipment and software in the new technological areas.
    a. Will the premature withdrawal of government-supported purchase programs in the new technology cause a failure in the overall programs? For example, if the government does not continue to support the purchase of reading devices will that "market" evaporate or be carried by the momentum generated in the early support?
    b. The purchases of equipment and software by schools that simply want to "use money up" may result in a bitter public as it relates to further support when such funds are really needed.
    c. Has the shot-in-the-arm support of Educational TV, programming, etc., served to start the ball rolling in those areas or only to appease a few interested schools with no appreciable national value?
3. With our present fluid population as well as the inner-city education problems the issue of how to finance schools will have a significant impact on the future purchase and use of new equipment and programs. Unless we devise a workable program of regional financial support of schools, growth of technology will not occur in the immediate future.

B. Industry and Education

1. Educators must become better informed on all new technology as it emerges to be certain they are the force which result in the educational applications. This application phase should not be left to private business.
2. Industrial suppliers should develop a better understanding of how the educational process works to aid him in the preparation of valid educational materials and equipment.
3. Cooperation is needed between the industrial community and schools to foster:
    a. Utilization of industrial talents in teaching programs.
    b. Technological breakthroughs are incorporated into schools as soon as they are available for practical usage.
    c. Valid testing methods must be developed to insure greater educational acceptance of technology.

15. J. RICHARD PFUND

A closer relationship must be developed between industry and education, and as this dialogue evolves the following items should be considered:

A. The term "industry" used by members of the media field generally refers to equipment manufacturers and materials suppliers. This concept must be broadened if we are to begin to meet the needs of the educational establishment.

B. The existence of new information, machines, and facilities will not automatically serve as a teleological force for all members of the teaching profession. In fact, in some cases they may tend to create animosity. New developments will also not serve all disciplines equally well.

C. In a large percentage of cases our colleges, universities and public schools are not administratively organized to develop the most appropriate utilization patterns for new technology. To develop full potential, libraries, instructional materials centers, museums, computers, research agencies, radio-television centers, self-study laboratories, etc., must complement one another rather than compete.

D. We have already begun to transplant business managerial know-how to improve the management of educational institutions, however, business and education have different basic motivational factors and these differences must be recognized by both parties before lasting progress can be expected. Direct adoption of industrial systems may not take into account the parameters of the educational environment.

E. One basic dilemma is that industrial representatives are generally not aware of the educational ramifications of equipment, and educators have not stated their desired outcomes in a way that can be interpreted or translated into equipment operation, facilities or systems development.

(continued)

F. A complement of professional, technical and clerical personnel far beyond the scope of most service agencies generally found in educational institutions will be required in the near future. Most educational institutions have a learned and willing faculty, but the faculty alone cannot create and produce materials, teach the classes, program, maintain and operate sophisticated communications equipment.

G. We must begin to develop understandings that media will provide for the restructuring of curricula designed to create freedom which encourages the learner to work beyond the actual organization and prescribed elements.

H. Industry is in the "training business" and has been doing an excellent job in relation to the goal that it has established, but the experiences within the industrial enterprise may not provide the information required for other situations.

I. Misinformed administrators, parents and members of the teaching profession often think that media will provide cure-alls for the student population explosion, the teacher shortage, and alleviate the need for additional classrooms.

J. Certain "reputable" firms seem to have been using the educational market as their product development agent.

K. Standardization versus Compatibility of equipment.

16. GEORGE A. PHILLIPS

Educational media personnel continually find themselves acting as the middle-men in the "Education-Industry Dialogue." In that role, they are seldom able to bring the principals face-to-face, and therefore spend fruitless hours trying to explain and apologize for the shortcomings of industry to members of the education profession, and vice versa. Is there ever going to be a time when the "twain shall meet?" Robert L. Rice's article, "The Relationship Between Education and Business," in the February 1968 issue of Audiovisual Instruction clearly and comprehensively describes a problem situation which is crying for a solution. My major concern is: How can we best follow Mr. Rice's suggestion, "Give the industrial leaders serving your field an opportunity to make their views and problems known to you on a regular basis. And you should similarly set up spokesmen to respond to these views as you deem appropriate."

17. CARLOTA JOHNSON DE RAMIREZ

The venture of industry into the educational arena has forced the rapid and dramatic changes we have been studying and discussing for some time, namely, instructional technology. This new dimension of the teaching learning situation is being looked at as the possible solution to the educational challenges of today and tomorrow. Nevertheless much has to be done before the proclamation of this great panacea.

A sincere dialogue between industry and education has been initiated. I submit the following questions:

A. How can industry and education work together towards the fulfillment of educational goals?

    1. Should these goals be redefined?

    2. Who should do it?

B. What implications will this redefinition bring about? In terms of:

    1. Personnel competencies and functions

    2. Modes of instruction

    3. Software and hardware

    4. Evaluation

C. Paul Saettler says that until now instructional technology has reflected, primarily, a concern with technical accomplishment. He suggests a change from a physical science concept to a

(continued)

behavioral science concept of instructional technology; and a change in the prevailing mode of thinking among educational practitioners as to how professional knowledge is produced and how it should be evaluated. Is this point considered of great importance by other authorities? How could this problem be attacked? What has been accomplished by the R and D Centers?

D. Has industry studied the possibilities of other markets outside continental U. S. A. ? If so, what facilities would it offer the prospective buyer for the evaluation of equipment and materials?

18. WARREN RANDALL

A. Are aids being developed as needs of education and discovered through discussion and research or are they hurriedly being developed for possible sale?

B. Are educators being involved in the planning and production of teaching aids produced by industry? Are educators assisting in working out in detail the operation of these aids for ease of understanding?

C. Will these aids be able to develop and sustain interest?

D. Will teaching aids be developed primarily for individual or group approaches?

E. What cost factors are being considered in production and development of teaching aids?

F. What is industry doing in terms of standardization of their aids and their hardware?

19. CARL W. SAMPSON

A. How can a more efficient dialogue between education and industry be established to sensatize each group to the needs of the other?

B. How can industry help educators to develop training programs?

C. How can industry help educators to become familiar with the application of systems to both hardware and software?

20. H. J. SKORNIA

A. The panacea-like blanket application of TV (for one) or color TV to do many things radio (or slides, or film or monochrome) could do better. Millions are being wasted in using TV for what it can't well do, or on color TV or film (in education) to do what monochrome could do better. How can we get selective, orchestration-type uses and concepts established?

B. Students ask me: How come, in our study of TV and radio, we still use largely books, readings and traditional approaches, rather than the new media themselves?

C. I've been increasingly frustrated, the last few years, at having my request for facilities, funds and other updatings, turned down. There's hardly a department on campus that doesn't use the modern media more than TV and Radio Departments and courses do. Focusing on this need by national groups is essential if broadcasting curricula (among others) are not to become a national "laughing stock." Or is this not a common problem? If not, who has outlines of Radio-TV courses based on new media (program, film samples and techniques, etc.).

21. N. SPILLIOS

A. The changing role of teachers in light of changes in technology and the lag of educational institutions to initiate and promote this role to teachers in direct fashion.

B. The rapid growth of hardware production in contrast to amount of software being made available.

C. Lack of information or design of effective facilities for production and storage in both school centers and district centers.

(continued)

D. The hesitancy of industry to provide arrangements for the exchange of hardware when it becomes obsolescent.

E. Facilities should be designed in such manner as to permit changes in hardware when it becomes obsolescent.

F. Factors to be taken into consideration in the change over of old buildings into media conscious buildings.

G. Recent developments in both acoustic and light control for open areas utilized for large group instruction.

H. The lag of software production utilizing such new techniques in teaching methodology as independent learning and the inquiry approach.

I. New developments to make local production more available within limited budgets, i. e., Kodak's Visualmaker.

22. ELDON F. WALTON

A. Education needs an application of business principles in solving educational problems.

B. How can we get educators to accept the business world into the private domain of education?

C. Business is going to have to back education to the point of getting educational money to be spent on technology. Salaries are taking better than 3/4 of the school budget now and it would appear that this percentage will go higher unless we secure more funds. With this high rate going for salaries there is very little left over for instructional media. The backing that business could give education might be in the form of support in getting federal and state governments to carry a greater share of the financial burden. Another worthwhile activity would be for more business to help in the financing of research and developmental costs of new technology so school districts would not have to pay for equipment and materials that have not been thoroughly developed and tested.

D. Will business lose interest when the job is half finished because of slow profits at the beginning?

E. If business and industry helps us to overcome the problems of education by developing new learning systems will education and educators "buy" it or will we stay in our self made rut?

23. JOHN WILSHUSEN

A. Schools do not adequately communicate their needs to industry. Possible reasons:

1. Schools do not themselves know what their needs are. Behavioral objectives should help.

2. Schools do not think industry will listen to them.

B. Industry has not tried seriously enough to determine the needs of education. I suspect that more market research is done before introduction of a new toothpaste than before introduction of a new text or projector. I recognize the potentially greater profit from the toothpaste.

C. Education has great need for technical consultation. Many avoidable mistakes are made in construction and modification of physical plants and in purchase of technical equipment. Sales personnel are seldom sufficiently equipped for this work. There is not a tradition of turning to consulting firms.

D. We may be approaching the point where industry would contract to operate (and perhaps even furnish) schools for a community. The advantages and disadvantages of such an eventuality should be investigated. Job Corps experience should shedsome light.

E. Should industry determine educational objectives? To what extent?

(continued)

F. The new management trend toward conglomerate corporations - the product is management expertise based upon a systems model. These corporations enter into any field, including education. Some of the new "knowledge industry" firms fall into this category. Concentration of control of educational objectives and/or design and production of software in the hands of a few large corporations would be dangerous. Related ideas concerning the mass media are contained in an article by Commissioner Nicholas Johnson of the FCC in the June 1968 issue of Atlantic Monthly.

G. Copyright - an extremely difficult and important area.

H. Hardware

1. Must be made more modular to enable fast field servicing.
2. Non-standardized fittings, plugs, lamps create expense and incompatibility problems.
3. Lack of standardization in VTR industry is slowing adoption of this desperately needed medium.
4. Quality control is unsatisfactory.
5. Insufficient field testing to de-bug before marketing.
6. Inhuman engineering (e.g., the popular 16mm projector which must be operated in the forward mode in order to rewind).
7. Poor engineering (e.g., the filmstrip projector that has sloppy focusing but is otherwise practically indestructible; the overhead with good optics, but a PLASTIC head attached with ONE bolt).

I. Industry must realize that not all of education is presently reducible to behavioral terms; that some parts of the educational process are and will remain nebulous (at least for some time). It is not, therefore, fully manageable.

J. Education must realize that it is operating in a grossly inefficient manner, and that much of the educational process is reducible to behavioral terms. It is, therefore, partially manageable. In the manageable area, education can learn from industry.

24. A. Z. PROULX

A. As all delegates will ask, how can we better establish and maintain a truly effective and sustaining "Education-Industry Dialogue"?

B. Can software keep up with the hardware being developed so that we end up with well-structured systems and not just parts thereof?

C. What methods do we now have for feedback to industry on effectiveness of systems and how can they be improved?

D. What part should industry play in the training of teachers in the use of today's (and tomorrow's) new systems?

E. Are the new educational systems industry is developing going to result in . . .

1. Over-sophistication of equipment?
2. De-emphasis of student-teacher dialogue?
3. Decrease in motivation?

F. What is the best method for educators to express their needs to industry?

G. Would it be necessary for even greater flexibility to be built into tomorrow's systems to allow for rapidly changing technology or will such an emphasis decrease effectiveness?

H. How can we make better use of advisory committees?

I. How can industry get better exposure on the operating (teacher) level of education?

25. ROBERT C. GERLETTI

A. I am concerned about the responsibility for field testing under "real world" conditions instructional materials designed for use in public schools.

B. I am concerned about the fact that many industries will not let us purchase selected parts from pre-packaged material.

C. I am concerned about the position of education and industry in connection with the copyright law.

D. I am concerned about the lack of a uniform system for identifying the content of instructional materials.

E. I would like to have access to a consumer report on equipment that is developed such as EPIE plans to do.

F. I am concerned about some lack of social responsibility on the part of some business and industry. I believe they have a significant responsibility on the materials presented on radio, television, newspapers, and paperback books.

G. I am concerned about the fact that certain corporations may be writing special legislation which may perpetuate an industry or a part of an industry that might better be dropped.

26. WALTER A. STICKNEY

A. I have been concerned with the proliferation of formats in software and related hardware (e.g. - film, video tape and audio tape). Perhaps it is a question of survival of the fittest and in time some standardization will ensue.

B. I am not frightened--indeed, I am excited--by the various corporate marriages in the media industry during the past several years. I am optimistic that the mergers will precipitate the economically feasible commercial production of instructional materials that could not have been possible a few years ago. I would hope that the more esoteric and single-purpose media that producers might have previously desired to develop, but which could not have been justified, can be produced. E.g. - an instructional package for American History, Grade 12 rather than a shotgun approach for grades 9 through 12; materials in multi-editions of the same title--filmstrips with captions in multi-level versions, or caption-less with multi-level disc or tape narrations.

C. I would like to see producers devote more energy to research and development--not mere market research, but sound educational research to include adequate pre-production field testing.

D. Similarly, I want to see media hardware come off production lines after sound human and industrial engineering research--controls that are idiot-proof, that are designed to comfortably fit the human hand; equipment manufactured of strong materials, carefully constructed, capable of being serviced and repaired, in housings that are functional as well as attractive.

E. Hopefully, an equitable pricing structure that is cognizant of the vastly expanded media market.

27. VERNON S. GERLACH

A. It seemed that in the past the primary concern has been with the development of different individual products. Today there is a heavy emphasis upon the organization of different kinds of producers of educational materials and equipment into elaborate technical systems. What changes are implied in this development as far as the ability of school people to select from a diverse array of products? Have those who select the materials and products which schools use lost any freedom?

B. Do the emerging giants in the "learning industry" promise a more workable distinction between science and engineering? Will the next decade bring a more effective interaction between the investigative activities of the former and the applicative activities of the latter? What will the pattern of mergers and acquisitions do to the complicated interaction between machines and social organizations and social needs--(for example, the steam engine that remained a toy because the Greeks had no technical system to support it and no economic or social necessity for it)?

28. NORTON F. KRISTY

My concerns are embodied in the enclosed paper "Significant Advances in Educational System Development."

29. **CLARENCE E. BASEMAN**

A. What has been done in the area of exchanging personnel between education and industry?

B. What can we expect within the near future regarding trends in the development of new media?

C. What is industry doing in regard to supplying comparative information to educators in the areas of equipment and material?

D. What is being done between education and industry in developing technical standards for the purchase of media equipment?

E. Has industry ever considered conducting a media survey similar to the one recently completed by DAVI with the accent on improving the technical development of equipment?

F. Is industry making changes in education, or is education making changes in industry?

G. In what ways can education and industry combine their efforts to reach the "static supervisor" in providing technology leadership to the classroom teacher?

H. Do industry and education reciprocate in their efforts, or is it a "one way street?"

I. Who is the motivator--education or industry?

30. **GORDON C. BLANK**

A. The media industry has historically researched and developed for the home, military, industrial training and governmental markets, with education frequently receiving the spinoff products. What can be done to intensify the research and development activities of the media industry specifically for the education market?

B. In recognition of the above, what can be done to enable the educational enterprise to articulate its needs so as to be able to inform industry what its needs are?

C. What steps can be taken to enable education to avoid the pitfall of acquiring equipment at the expense of the associated materials and programing which are necessary for the effective use of such equipment? How can the "software gap" be bridged?

D. It is often said that the industrial profit motive and educational needs are not incompatible. Is this really the case?

E. The media industry must, out of economic necessity, concentrate on high-yield markets. What ways can be found to enable more effective product development for the educational areas which are of a low-yield nature?

F. What are the implications of the trend among recently merged publishing houses and electronic firms to produce packaged kits which are associated with or similar to the national curricular projects?

31. **LEE E. CAMPION**

I am concerned about the fact that educators in the film industry have not become an integral part of instruction. It has been a long time since we have talked about the role of the educational film. I believe the two main drawbacks to effective use of film are logistic problems and economic problems which have not yet been faced. Television problems and copyright problems are closely related to possible solutions to the film problem. If you see any way to get this problem on the agenda, I believe it would be a stimulating and interesting discussion. Harold Hill, of course, is heading up the Ad-Hoc Committee, getting film producers and educators together to discuss television use rights for educational film. I am sure he can add to this topic.

32. **DEAN W. DARBY**

A. The need for a random access slide or filmstrip projector - 'reasonably' priced. (Preferably, one that can handle up to 300 slides per second with modular construction so that units could be added.)

B. An 'instant' 35mm slide maker (like Polaroid or something).

C. Lens brackets for small TV cameras that will accept 16mm or 35mm lenses for extreme and extreme-extreme closeup work.

D. 'Silencers' for motion picture and slide projectors. (Most of the ones we have sound like threshing machines.)

(continued)

E. Some reliable system for controlling resolution, color, grain, etc., in duplicating 35mm color slides. (Many of our slides have such drastic color changes that we wind up with the wrong diagnosis).

F. Some device or modification of a 16mm sound projector that would permit the placement of impulses on the film which would automatically control an auxiliary 35mm projector. (Turn the lamp on, off and advance slides)

33. SISTER SIGRID HUTCHESON

A. How can educators and teachers most effectively convey to representatives of industry the message concerning what they want in the line of equipment and materials?

B. Is the curriculum in education going to become increasingly dominated by industry?

C. Is industry concerned about improving education or about developing an increasingly more profitable business?

34. W. B. OGLESBY

A. Does the dog wag the tail or vice versa? Who is the dog? Who is creating the demand for technology?

B. Schools have mucho money from federal sources; university media centers receive only a tip from Title VI of HEA. Yet teacher education programs are where pre-service teachers, should and often do, become acquainted with media! Why are soft-and hardware manufacturers reluctant to cooperate financially with the fertile media salesroom?

35. MARY SCOFIELD

A. I'm concerned that industry will put too much emphasis on the manufacture of sophisticated hardware and not enough toward the materials to make equipment a real teaching tool.

B. We need more standardization so that educators do not have to become familiar with so many types of equipment that do the same job.

C. Closer working relations with industry and education.

D. I fear schools will be sold hardware they cannot use effectually because of lack of materials or lack of technical knowledge required to operate the equipment.

E. There are too many gimicks being manufactured. New equipment and changes in the existing audiovisual equipment are being made so rapidly that school systems find their hardware outdated before its use can be accomplished.

36. PAUL ZUCKERMAN

A. Universality in equipment design, particularly in advanced electronic instructional systems.

B. Effectiveness criteria for industry produced instructional materials.

C. Adequate training of AVD's and media specialists to meet contemporary and future requirements.

D. Responsible leadership of industry in research and development of instructional materials.

E. Videotape or 8mm or 16mm film; the perplexing problem for media specialists.

F. Professional quality of materials produced for education.

G. U.S. Government - partner or competitor: Increasing role of federal government in producing visual and audiovisual materials for education.

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